M80678527.ST25
SEQUENCE LISTING

<110>   Agriculture Victoria Services Pty Ltd
         AgResearch Limited

<120>   Manipulation of organic acid biosynthesis and secretion

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<151>   2003-04-14

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ggaattcatt gagggagtga agaacaggaa gcggaaaatg tctggctttg ggcaccgtgt     240

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gaggccccaa caggtataca ccggtacttg gctaaggcat tacaccccag tgagagaacg     240

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tcggcgtgct ggctctgccc tgtagaacag tctgcatgat acagcataca gtccacacaa     360

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cacgtatata taggcaataa actaataatg ccgccaggac acttcactgg tggtcatgtg     480

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65   70   75   80

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                  85   90   95

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              100   105   110

Ser Ala His Ala Gly His Leu Val Gly Ser Ala Leu Ser Asp Pro Tyr
              115   120   125

Leu Ser Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly Pro Leu His Gly
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              165   170   175

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              180   185   190

Arg Asn Thr Asp Pro Arg Tyr Ser Cys Gln Arg Glu Phe Ala Leu Lys
              195   200   205

Tyr Leu Pro Glu Asp Pro Leu Phe Gln Leu Val Ser Lys Leu Tyr Glu
    210   215   220

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225   230   235   240

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              260   265   270

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ttgagagtga atttgcaaag gcttatgaga agggaattca taaatcaaag ttctgggagc     120

ctacatatga agatagctta aatttgattg ctcggcttcc acaagtggct tcatatgttt     180

accggagaat tttcaaggac gggaaaacta ttgcagctga taatacactg gactacgcag     240

ctaatttttc acacatgctt ggttttgatg accccaaaat gctggagttg atgcgcctat     300

acataacaat tcacactgat cacgaaggag ggaatgttag tgctcatgct gggcatctgg     360

ttggaagtgc tctgtcagat ccttatcttt cttttgcagc ggcactgaac ggtttagctg     420

gaccactgca cggcttggct aatcaggaag tgttgttatg gatcaaatct gtgatggaag     480

aaaccgggag taacattaca actgatcagc ttaaagaata tgtttggaag acactgaaga     540

gtggaaaggt tgttcctggc tatggtcatg gagttctacg taatacagat ccacgatact     600

cgtgccaaag ggagtttgca ctgaagtatt tacctgaaga cccacttttc caactggtct     660
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ccaagttgta tgaagttgtg cctcctatcc tcactgagtt aggcaaggta aaaaacccat    720

ggcctaatgt tgatgctcac agnggagttt tgctcaacca cttcggatta gttgaacacg    780

gnactacact gncttgntcg gn                                             802
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acgtaataca gatccacgat actcgtgcca aagggagttt gcactgaagt atttacccga   180

agacccactt ttccaactgg tctccaagtt gtacgaagtt gtgcctccta tcctcaccga   240

gttaggcaag gtaaaaaacc catgccctaa tgttgatgct cacagtggag ttttgctcaa   300

ccacttcgga ttagttgaag cacggtacta cactgtcttg ttcggcgtct caaggagcat   360

gggaattgga tctcagccca tttgggaccg tgccctcggc ctgccacttg aaagaccgaa   420

gagtgtcacc atggagtggc tggaaaacca ctgcaagaag gctgcggcct gaagctacac   480

caatgcttcg ttttacaaat caggccgtct ttgatgttaa taatgactga gcataagtta   540

ggcatggtta gccttgtttt accatcttcg ttttcctggc caataactgg agcaagaggc   600

ttacagacgg tagaattttg taaccaccgn tacttgaaca ccgaatcant taaatgtcat   660

ttggcataaa gagattagga catgacacat aagttttatg tgncgntcgg               710
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ctggtctcca agttgtacga agttgtgcct cctatcctca ccgagttagg caaggtaaaa     180

aacccatggc ctaatgttga tgctcacagt ggagttttgc tcaaccactt cggattagtt     240

gaagcacggt actacactgt cttgttcggc gtctcaagga gcatgggaat tggatctcag     300

ctcatttggg accgtgccct cggcctgcca cttgaaagac gaagagtgt caccatggag     360

tggctggaaa accactgcaa gaaggctgcg gcctgaagct acaccaatgc ttngttttac     420

aaatcangcc gtctttgatg ttaataatga ctgagcataa gttaggcatg ggtagccttg     480

ttttaccatn ttcgttttcc tggccaataa ctggagcaag aggctcacag acggtagaat     540

tttgtaacca ccggtacttg acaccgaatn anntaaatgg natttggcat aaagagatta     600
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aatgcttcgt tttacaaatc aggccgtctt tgatgttaat aatgactgag cataagttag    180

gcatggttag ccttgtttta ccatcttcgt tttcctggcc ataactgga gcaagaggct     240

cacagacggt agaattttgt aaccaccgtt acttgaacac cgaatcagtt aaatgtcatt    300

tggcataaag agattaggac atgacacata agttttatgt gtcgctcga                349


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cttcttattt ccaccccaac cgcccaacat gtgtcctccc accgaanaaa cacctgctac    120

caacggccat agcaacggca ccaacggcgc caatggctcc aaggaaggct tcacaggcgt    180

cacgaccaga cagaaccctc accctacaca caagagccca tatgcacctg ttggcgactt    240
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tttgtcaaat gtcggccgct tcaagattat cgagagcaca ttaagagagg gcgagcaatt      300
cgccaacgcc tacttcgacc ttgaggctaa aatcaagatc gccagagctc tcgacaactt      360
tggtgttgac tacattgaag ttaccagccc tgctgcctct gagcagtcaa gaagggactg      420
cgaagccctc tgcaagctcg gattgaaagc caagatcctt acccacgtac gatgccacat      480
ggacgatgcc agaatcgctg tcgagactgg tgttgacggc ctcgatgtcg tcattggaac      540
ctctgcgtac ctccgcgagc acagccatgg caaggacatg acatacatca aaaacacagc      600
gctggaggtg attgagtttg tcaagagcaa gggan                                 635
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Asn Pro Pro Thr Phe Leu Phe Pro Pro Gln Pro Pro Asn Met Cys Pro
            20                  25                  30


Pro Thr Glu Xaa Thr Pro Ala Thr Asn Gly His Ser Asn Gly Thr Asn
        35                  40                  45


Gly Ala Asn Gly Ser Lys Glu Gly Phe Thr Gly Val Thr Thr Arg Gln
    50                  55                  60


Asn Pro His Pro Thr His Lys Ser Pro Tyr Ala Pro Val Gly Asp Phe
65                  70                  75                  80
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M80678527.ST25

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Leu Ser Asn Val Gly Arg Phe Lys Ile Ile Glu Ser Thr Leu Arg Glu
                85              90              95

Gly Glu Gln Phe Ala Asn Ala Tyr Phe Asp Leu Glu Ala Lys Ile Lys
            100             105             110

Ile Ala Arg Ala Leu Asp Asn Phe Gly Val Asp Tyr Ile Glu Val Thr
            115             120             125

Ser Pro Ala Ala Ser Glu Gln Ser Arg Arg Asp Cys Glu Ala Leu Cys
    130             135             140

Lys Leu Gly Leu Lys Ala Lys Ile Leu Thr His Val Arg Cys His Met
145             150             155             160

Asp Asp Ala Arg Ile Ala Val Glu Thr Gly Val Asp Gly Leu Asp Val
                165             170             175

Val Ile Gly Thr Ser Ala Tyr Leu Arg Glu His Ser His Gly Lys Asp
                180             185             190

Met Thr Tyr Ile Lys Asn Thr Ala Leu Glu Val Ile Glu Phe Val Lys
            195             200             205

Ser Lys Gly
    210
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M80678527.ST25

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agtcgttccc ggttacggac acgccgttct ccgcaagacc gaccccccgct acgtctccca   180

gcgcgagttc gcccagaagc accttcccga cgacccaatg ttcaagctcg tcagtcaggt   240

ctacaagatc gcccctggtg ttctcaccga gcacggcaag accaagaacc cctaccccaa   300

cgtcgacgcc cactccggtg tcctcctcca gtactacggc ctcactgagc agaactacta   360

caccgttctc ttcggtgtat cccgtgcgct cggtgtcctt ccccagctta tcattgaccg   420

tgccgtcggt gcccccattg agaggcccaa gtctttcagc actgaggctt acgccaagtt   480

ggttggtgct aagttgtaag cgcgttactg caacgtgctc tacagccagg agaatgtgga   540

ggaatttgtt taacattcag agataccttg tcctgtgtag aattgcaatg taaggatagg   600

gaatgggagc gttacggcgc tacatcacta catttn                             636
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M80678527.ST25

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Xaa Ala Ile Gly Asn Asp Leu Ser Asp Gln Ala Ile Lys Asp Tyr Leu
            20   25   30

Trp Ser Thr Leu Lys Ala Gly Gln Val Val Pro Gly Tyr Gly His Ala
        35   40   45

Val Leu Arg Lys Thr Asp Pro Arg Tyr Val Ser Gln Arg Glu Phe Ala
    50   55   60

Gln Lys His Leu Pro Asp Asp Pro Met Phe Lys Leu Val Ser Gln Val
65   70   75   80

Tyr Lys Ile Ala Pro Gly Val Leu Thr Glu His Gly Lys Thr Lys Asn
            85   90   95

Pro Tyr Pro Asn Val Asp Ala His Ser Gly Val Leu Leu Gln Tyr Tyr
            100   105   110

Gly Leu Thr Glu Gln Asn Tyr Tyr Thr Val Leu Phe Gly Val Ser Arg
        115   120   125

Ala Leu Gly Val Leu Pro Gln Leu Ile Ile Asp Arg Ala Val Gly Ala
    130   135   140

Pro Ile Glu Arg Pro Lys Ser Phe Ser Thr Glu Ala Tyr Ala Lys Leu
145   150   155   160

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Val Gly Ala Lys Leu
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tgttgaggca aaggctggaa agggatctgc aaccttgtcc atggcgtatg ctggcgcagt   180

ttttggtgat gcatgcttga agggtctgaa cggagttcct gacattgttg aatgctccta   240

cgtgcaatca actatcacag aactgccatt ctttgcctcc aaggtgaggc tcgggaagaa   300

tggagtcgag gaagtgcttg gtttgggtga gctgtcggcc tttgagaagg aaggtttgga   360

aagtctcaag ggtgagctca agtcttcaat tgacaagggc atcgcgttcg ccaatgcgag   420

ttaattaatt ttgcagatta tagcaaacca ggtctagtta aggggtctgt ttttgacttt   480

ttgttcagtg cttttttctgc ccatcacgtg ggcatggaag atttgagctt cacaataaaa   540

atccggcggc gtaatgccac agaacattac ttgtacaaga gggaactagt tcgtgtcaag   600

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gtgantccat tggcctcaag ccaaaaaaaa aaaaaa   696

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<213> Lolium perenne

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                20   25   30

Thr Gln Glu Gly Gly Thr Glu Val Val Glu Ala Lys Ala Gly Lys Gly
                35   40   45

Ser Ala Thr Leu Ser Met Ala Tyr Ala Gly Ala Val Phe Gly Asp Ala
                50   55   60

Cys Leu Lys Gly Leu Asn Gly Val Pro Asp Ile Val Glu Cys Ser Tyr
65   70   75   80

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Val Gln Ser Thr Ile Thr Glu Leu Pro Phe Phe Ala Ser Lys Val Arg
                 85                  90                  95
```

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Leu Gly Lys Asn Gly Val Glu Glu Val Leu Gly Leu Gly Glu Leu Ser
             100                 105                 110
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Ala Phe Glu Lys Glu Gly Leu Glu Ser Leu Lys Gly Glu Leu Lys Ser
         115                 120                 125
```

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Ser Ile Asp Lys Gly Ile Ala Phe Ala Asn Ala Ser
    130                 135         .   .   140
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tgttgaggca aaggctggaa agggatctgc aaccttgtcc atggcgtatg ctggcgcagt      180
ttttggtgat gcatgcttga agggtctgaa cggagttcct gacattgttg aatgctccta      240
cgtgcaatca actatcacag aactgccatt ctttgcctcc aaggtgaggc tcgggaagaa      300
tggagtcgag gaagtgcttg gtttgggtga ctgtcggcc tttgagaagg aaggtttgga      360
aagtctcaag ggtgagctca agtcttcaat tgacaagggc atcgcgttcg ccaatgcgag      420
ttaattaatt ttgcagatta tagcaaacca ggtctagtta aggggtctgt tgtttttgtt      480
cagtgctttt tctgcccatc acgtgggcat ggaagatttg agcttcacaa taaaaatccg      540
gcggcgtaat gccacagaac attacttgta caagagggaa ctagttcgtg tcaagttttg      600
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gttgaggcaa aggctggaaa gggatctgca accttgtcca tggcgtatgc tggcgcagtt      180
tttggtgatg catgcttgaa gggtctgaac ggagttcctg acattgttga atgctcctac      240
gtgcaatcaa ctatcacaga actgccattc tttgcctcca aggtgaggct cgggaagaat      300
ggagtcgagg aagtgcttgg tttgggtgag ctgtcggcct ttgagaagga aggtttggaa      360
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agtctcaagg gtgagctcaa gtcttcaatt gacaagggca tcgcgttcgc caatgcgagt        420

taattaattt tgcagattat agcaaaccag gtctagttaa ggggtctgtt gtttttgttc        480

agtgcttttt ctgcccatca cgtgggcatg gaagatttga gcttcacaat aaaaatccgg        540

cggcgtaatg ccacagaaca ttacttgtac aagagggaac tagttcgtgt caagttttga        600

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gttgaggcaa aggctggaaa gggatctgca accttgtcca tggcgtatgc tggcgcagtt        180

tttggtgatg catgcttgaa gggtctgaac ggagttcctg acattgttga atgctcctac        240

gtgcaatcaa ctatcacaga actgccattc tttgcctcca aggtgaggct cgggaagaat        300

ggagtcgagg aagtgcttgg tttgggtgag ctgtcggcct ttgagaagga aggtttggaa        360

agtctcaagg gtgagctcaa gtcttcaatt gacaagggca tcgcgttcgc caatgcgagt        420

taattaattt tgcagattat agcaaaccag gtctagttaa ggggtctgtt gtttttgttc        480

agtgcttttt ctgcccatca cgtgggcatg gaagatttga gcttcacaat aaaaatccgg        540

cggcgtaatg ccacagaaca ttacttgtac aagagggaac tagttcgtgt caagttttga        600

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M80678527.ST25

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<222>  (543)..(544)
<223>  n is a, c, g, or t

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tctagtgaag acatcaaggc tctcaccaag aggacacagg agggtgggac agaagttgtt     120

gaggcaaagg ctggaaaggg atctgcaacc ttgtccatgg cgtatgctgg cgcagttttt     180

ggtgatgcat gcttgaaggg tctgaacgga gttcctgaca ttgttgaatg ctcctacgtg     240

caatcaacta tcacagaact gccattcttt gcctccaagg tgaggctcgg gaagaatgga     300

gtcgaggaag tgcttggttt gggtgagctg tcggcctttg agaaggaagg tttggaaagt     360

ctcaagggtg agctcaagtc ttcaattgac aagggcatcg cgttcgccaa tgcgagttaa     420

ttaattttgc agattatagc aaaccaggtc tagttaaggg gtctgttgnt tttgntcann     480

gctttttctg cccatcacgt gngcatgnaa gatttgagct tnacantann tatnccngcg     540

cgnn                                                                 544


<210>  27
<211>  589
<212>  DNA
<213>  Lolium perenne

<220>
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<223>  n is a, c, g, or t

<220>
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<222>  (386)..(386)
<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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gcgtatgctg gcgcagtttt tggtgatgca tgcttgaagg gtctgaacgg agttcctgac       120

attgttgaat gctcctatgt gcaatcaact atcacagaac tgccattctt tgcctccaag       180

gtgaggctcg ggaagaatgg agtcgaggaa gtgcttggtt tgggtgagct gtcggccttt       240

ganaaggaag gtttggaaag tctcaagggt gagctcaagt cttcaattga caagggcatc       300

gcgttcgcca atgcgagttg attaaatttg cagattatag caatccaggt ctagttgagg       360

ggtctgtttt tgactttttg ttcagngctt tttctgccca tcacgtgggc atggaagatt       420

tgagcttcac aataaaaatc cggcggcgta atgccacana acattacttg gacaagaggg       480

aactagttcg ggtnaagttt tgaactggna cattaaacaa ccaattgttg tgcccctttg       540

ngaaccgccc tttgggggtg antccattgg nctnaagccn aaaaaaaaa                    589


<210>  28
<211>  413
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M80678527.ST25

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<212>  DNA
<213>  Lolium perenne


<220>
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<222>  (3)..(3)
<223>  n is a, c, g, or t

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<222>  (5)..(5)
<223>  n is a, c, g, or t

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<222>  (12)..(13)
<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<222>  (409)..(409)
<223>  n is a, c, g, or t

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gtnangctcg gnnagaatgg agtcgaggaa gtgcttggtt tgggtgagct gtcggccttt      60

gagaaggaag gtttggaaag tctcaagggt gagctcaagt cttcaattga caagggcatc     120

gcgttcgcca atgcgagttg attaaatttg cagattatag caatccaggt ctagttgagg     180

ggtctgtttt tgactttttg ttcagtgctt tttctgccca tcacgtgggc atggaagatt     240

tgagcttcac aataaaaatc cggcggcgta atgccacaga acattacttg tacaagaggg     300

aactagttcg tgtcaagttt tgaactggta cattaaacga acaattgttg atgcactttg     360

tgaaccgtcc tttggtgttg attccattgt cttcaagtta acgaanaana aaa             413


<210>  29
<211>  345
<212>  DNA
<213>  Lolium perenne


<220>
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<222>  (79)..(79)
<223>  n is a, c, g, or t

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aatggagtcg aggaagtgct tggtttgggt gagctgtcgg cctttgagaa ggaaggtttg      60

gaaagtctca agggtgagnt caagtcttca attgacaagg gcatcgcgtt cgccaatgcg     120

agttgattaa atttgcagat tatagcaatc caggtctagt tgaggggtct gtttttgact     180

ttttgttcag tgctttttct gcccatcacg tgggcatgga agatttgagc ttcacaataa     240

aaatccggcg gcgtaatgcc acagaacatt acttgtacaa gagggaacta gttcgtgtca     300

agttttgaac tggtacatta aacgaacaat tgttgaaaaa aaaaa                      345
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<210> 30
<211> 807
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

<220>
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<222> (49)..(49)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (503)..(503)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (506)..(506)
<223> n is a, c, g, or t

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<222> (656)..(656)
<223> n is a, c, g, or t

<220>
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<222> (678)..(678)
<223> n is a, c, g, or t

<220>
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<222> (807)..(807)
<223> n is a, c, g, or t

<400> 30
tttggtnctt ttgccgagcg agaaagctgt tcggtgtcac caccccttgng ttgttcgtgc   60

taaaactttc tacgctggga aggcaaacgt gccagtcact ggggtgaatg ttcctgttgt   120

tggtggccat gctggtgtta ctatcctgcc acagttctca caggctactc ctgcaagtaa   180

tgcattgtcc catgaggacc ttaaggccct caccaagagg acacaagatg gtgggacgga   240

agttgttgaa gcaaaggctg gaaagggctc agcaacattg tcaatggcat atgctggtgc   300

agtatttgga gatgcatgct tgaaggggct caatggagtt cctgacattg tagagtgctc   360

ctttgtgcaa tcaaccgtaa cagagctgcc attctttgcc tccaaggtaa ggctcggcaa   420

gaacggagtg gaggaagtga ttgggctggg cgagctgtct gccttcgaga aggagggtct   480

ggagagcctc aagggcgagc tgntgncctc catcgagaag ggtatcaagt tcgcgcagga   540

gagctagtca acctgctcag attctaacac tccgcacatg aactcggtgg gatctgatga   600

atttttggta cgactccttt cactgccccc ttctcctggg gacattgagg cgtcgngctc   660

cacaataaaa tggcgtgnct tgttgccata ctgaactgaa cttgtaatac cagaaagagt   720

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gaaaccctgt gccttatgta ccacagtacg gtgaacccga aaatcatgaa ggtagcagaa     780

gattctgtgg aagcttttttt cttttan                                        807
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<210>   31
<211>   181
<212>   PRT
<213>   Lolium perenne


<220>
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<223>   Xaa can be any naturally occurring amino acid

<220>
<221>   misc_feature
<222>   (16)..(16)
<223>   Xaa can be any naturally occurring amino acid

<220>
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<222>   (168)..(169)
<223>   Xaa can be any naturally occurring amino acid

<400>   31
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Leu Xaa Leu Leu Pro Ser Glu Lys Ala Val Arg Cys His His Pro Xaa
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Val Val Arg Ala Lys Thr Phe Tyr Ala Gly Lys Ala Asn Val Pro Val
                20                25                30


Thr Gly Val Asn Val Pro Val Val Gly Gly His Ala Gly Val Thr Ile
            35                40                45


Leu Pro Gln Phe Ser Gln Ala Thr Pro Ala Ser Asn Ala Leu Ser His
    50                55                60


Glu Asp Leu Lys Ala Leu Thr Lys Arg Thr Gln Asp Gly Gly Thr Glu
65                70                75                80


Val Val Glu Ala Lys Ala Gly Lys Gly Ser Ala Thr Leu Ser Met Ala
                85                90                95


Tyr Ala Gly Ala Val Phe Gly Asp Ala Cys Leu Lys Gly Leu Asn Gly
                100               105               110


Val Pro Asp Ile Val Glu Cys Ser Phe Val Gln Ser Thr Val Thr Glu
            115               120               125


Leu Pro Phe Phe Ala Ser Lys Val Arg Leu Gly Lys Asn Gly Val Glu
    130               135               140


Glu Val Ile Gly Leu Gly Glu Leu Ser Ala Phe Glu Lys Glu Gly Leu
145               150               155               160
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M80678527.ST25
Glu Ser Leu Lys Gly Glu Leu Xaa Xaa Ser Ile Glu Lys Gly Ile Lys
             165   170   175

Phe Ala Gln Glu Ser
            180

<210>   32
<211>   708
<212>   DNA
<213>   Lolium perenne

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<222>   (702)..(702)
<223>   n is a, c, g, or t

<220>
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<222>   (708)..(708)
<223>   n is a, c, g, or t

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<400> 32
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tttggtnctt ttgccgagna ntaatctgtt cggtgtcacc acccttgngt tgttcgtgct       60

aaaactttct acgctgggaa ggcaaacgtg ccagtcactg gggtgaatgt tcctgttgtt      120

ggtggccatg ctggtgttac tatcctgcca ctgttctcac aggctactcc tgcaagtaat      180

gcattgtccc atgaggatct taaggccctc accaagagga cacaagatgg tgggacggaa      240

gttgttgaag caaaggctgg aaagggctca gcaacattgt caatggcata tgctggtgca      300

gtatttggag atgcatgctt gaaggggctc aatggagttc ctgacattgt agagtgctcc      360

tttgtgcaat caactgtaac agagctgcca ttctttgcct ccaaggtaag gctcggcaag      420

aacggagtgg aggaagtgat tgggctgggc gagctgtctg ccttcgagaa ggagggtctg      480

gagagcctca agggcgagct gntgncctcc atcgagaagg gtatcaagtt cgcgcaggag      540

agctagtcaa cctgctcaga ttctgacact ccgtacatga actcggtggg atctgatgaa      600

tttttggtac gactcctttc tctgcccctt tttcgtgggg acattgaggc gttgngcttc      660

acattaaaat ggcgtgnntt gttgcatact ganctgacct tntattcn               708
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<210> 33
<211> 790
<212> DNA
<213> Lolium perenne

<220>
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<222> (790)..(790)
<223> n is a, c, g, or t

<400> 33
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gcgagagagc tgtttggtgt caccaccctt gtgttgttcg tgctaaaact ttctacgctg       60

ggaaggcaaa cgtgcccgtc actggggtga atgttcctgt tgttggtggc catgctggtg      120

ttactatcct gccacagttc tcacaggcta ctcctgcaag taatgcattg tcccatgagg      180

accttaaggc cctcaccaag aggacacaag atggtgggac ggaagttgtt gaagcaaagg      240

ctggaaaggg ctcagcaaca ttgtcgatgg catatgctgg tgcagttttt ggagatgcat      300

gcttgaaggg gctcaatgga gttcctgaca ttgtagagtg ctcctttgtg caatcaaccg      360

taacagagct gccattcttt gcctccaagg taaggctcgg caagaacgga gtggaggaag      420

tgattgggct gggcgagctg tctgccttcg agaaggaggg tctggagagc ctcaagggcg      480

agctgttgtc ctccattgag aagggtatca agttcgctca ggagagctag tcaacctgct      540

cagattctaa cactccgcac atgaactcgg tgggatctga tgaattttg gttcgactcc      600

tttcactgcc cccttctcct ggggacattg aggcgtcgtg ctccacaata aaatggcgtg      660

tcttgttgcc atactgaact gaacttgtaa taccagaaag agtgaaaccc tgtgccttat      720

gtaccacagt acggtgaacc cgaaaatcat gaaggtagca gaagattctg tggaagcttt      780

tttctttttan                                                          790
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<210>   34
<211>   419
<212>   DNA
<213>   Lolium perenne


<220>
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<222>   (2)..(3)
<223>   n is a, c, g, or t

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<222>   (7)..(7)
<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<222>   (27)..(27)
<223>   n is a, c, g, or t

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<222>   (48)..(48)
<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<222>   (77)..(77)
<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

<220>
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<222>   (227)..(228)
<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<220>
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M80678527.ST25

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<223>   n is a, c, g, or t

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<222>   (385)..(385)
<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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gtcaatgttc ctgtngntgg cgggcatgcc ggagttacna tattgccact cctttcgcag   120

gttaatcctc cctgctcatt caccatgagg aaattagtat ctcaccttca cagcatacag   180

aatggtggga cagaagtngt cgaggcgaaa gctggagcag gatcggnnac tntttctatg   240

gcgnatgcgg cagctaaatt tgcagatgct tgctngagag gattgcatgg tgatgctggg   300

atagnggant gctcttatgt ggattctcag gtgacggganc tntctttntt tgcatccaaa   360

gttcgccttg gttgttctgg cgtcnaggag atcttgccac ttggtccact caacgagtn    419


<210>   35
<211>   139
<212>   PRT
<213>   Lolium perenne


<220>
<221>   misc_feature
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<220>
<221>   misc_feature
<222>   (3)..(3)
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M80678527.ST25

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<220>
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<222>  (6)..(6)
<223>  Xaa can be any naturally occurring amino acid

<220>
<221>  misc_feature
<222>  (9)..(9)
<223>  Xaa can be any naturally occurring amino acid

<220>
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<223>  Xaa can be any naturally occurring amino acid

<220>
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<222>  (25)..(26)
<223>  Xaa can be any naturally occurring amino acid

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<223>  Xaa can be any naturally occurring amino acid

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<220>
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<223>  Xaa can be any naturally occurring amino acid

<400>  35
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Xaa Gly Xaa Pro Ser Xaa His Thr Xaa Val Gly Glu Val Leu Gly Xaa
1   5   10   15

Asp Pro Arg Asp Val Asn Val Pro Xaa Xaa Gly Gly His Ala Gly Val
            20   25   30

Xaa Ile Leu Pro Leu Leu Ser Gln Val Asn Pro Pro Cys Ser Phe Thr
        35   40   45

Met Arg Lys Leu Val Ser His Leu His Ser Ile Gln Asn Gly Gly Thr
    50   55   60

Glu Xaa Val Glu Ala Lys Ala Gly Ala Gly Ser Xaa Thr Xaa Ser Met
65   70   75   80

Ala Xaa Ala Ala Ala Lys Phe Ala Asp Ala Cys Xaa Arg Gly Leu His
        85   90   95

Gly Asp Ala Gly Ile Xaa Xaa Cys Ser Tyr Val Asp Ser Gln Val Thr
        100   105   110

Xaa Xaa Ser Xaa Phe Ala Ser Lys Val Arg Leu Gly Cys Ser Gly Val
        115   120   125

Xaa Glu Ile Leu Pro Leu Gly Pro Leu Asn Glu
    130   135

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<210>  36
<211>  774
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

<220>
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<222>  (4)..(4)
<223>  n is a, c, g, or t

<220>
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<222>  (774)..(774)
<223>  n is a, c, g, or t

<400>  36
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gngnttccgc caacacaaca ccaccgctcc cccgtccgca tctctccctt tcgcctccat   60

cgatccagat cccacacacc gccgcagcca gcaacgatga ggccgtcggc gatgagatcc   120

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gccgcgcagc tcctccgccg ccgcagctac tcgtccgcgt ccggccagcc ggagcggaag    180
gtggccatcc tcggcgcggc cggcgggatc gggcagccgc tggcgctcct catgaagctg    240
aacccgctcg tctcctccct ctccctctac gacatcgccg ccacccccgg cgtcgccgcc    300
gacgtctccc acatcaactc cccggccctg gtgaaggggt tcatgggcga cgatcagctc    360
gcggaggcgt tggaggggc cgacctcgtc atcatcccgg ccggcgttcc gaggaagccc    420
ggcatgacca gggacgatct cttcaacatc aacgccggca tcgttaagaa cctctgcacc    480
gccatcgcca agtactgccc caacgctctt atcaacatga tcagcaaccc tgtgaactca    540
actgttccaa ttgctgctga agttttcaag aaggctggaa cctatgatga agaagttg     600
tttggtgtga ccactcttga tgttgttcgt gccaggactt tctatgctgg gaaggctaat    660
gtacctgtta ctggtgtgaa cgttcctgtt gttggtggtc atgctggtat caccattctg    720
ccactgttct cacaggcaac tccttcgact aatgcattgt ctagtgaaga catn          774
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<210> 37
<211> 258
<212> PRT
<213> Lolium perenne

<220>
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<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (258)..(258)
<223> Xaa can be any naturally occurring amino acid

<400> 37

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Xaa Xaa Pro Pro Thr Gln His His Arg Ser Pro Val Arg Ile Ser Pro
1               5                  10                  15

Phe Arg Leu His Arg Ser Arg Ser His Thr Pro Pro Gln Pro Ala Thr
                20                  25                  30

Met Arg Pro Ser Ala Met Arg Ser Ala Ala Gln Leu Leu Arg Arg Arg
            35                  40                  45

Ser Tyr Ser Ser Ala Ser Gly Gln Pro Glu Arg Lys Val Ala Ile Leu
    50                  55                  60

Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Met Lys Leu
65                  70                  75                  80

Asn Pro Leu Val Ser Ser Leu Ser Leu Tyr Asp Ile Ala Ala Thr Pro
                85                  90                  95

Gly Val Ala Ala Asp Val Ser His Ile Asn Ser Pro Ala Leu Val Lys
            100                 105                 110
```

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Gly Phe Met Gly Asp Asp Gln Leu Ala Glu Ala Leu Glu Gly Ala Asp
        115   120   125

Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg
    130   135   140

Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys Asn Leu Cys Thr
145   150   155   160

Ala Ile Ala Lys Tyr Cys Pro Asn Ala Leu Ile Asn Met Ile Ser Asn
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Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe Lys Lys Ala
        180   185   190

Gly Thr Tyr Asp Glu Lys Lys Leu Phe Gly Val Thr Thr Leu Asp Val
        195   200   205

Val Arg Ala Arg Thr Phe Tyr Ala Gly Lys Ala Asn Val Pro Val Thr
    210   215   220

Gly Val Asn Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu
225   230   235   240

Pro Leu Phe Ser Gln Ala Thr Pro Ser Thr Asn Ala Leu Ser Ser Glu
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ttgaccccag agatgtcaat gttcctgttg ttggcgggca tgccggagtt acgatattac     180

cactcctttc gcaggttagt cctccctgct cgttcacccc tgaggaaatt agttatctca     240

cctcacgcat acagaatggt gggacagaag ttgtggaggc gaaagcagga gcaggatcgg     300

caactctttc tatggcgtat gcggcagcta aatttgcaga tgcttgcttg agaggattgc     360

atggtgatgc tgggatagtg gagtgctctt atgtggattc tcaggtgacc ggaactgcct     420

tctttgcatc caaagttcgc ctaggtcgtt ctggcgtcga ggagatcttg caacttgggt     480

ccactgaacc aggttttgaa aganctggac tggaanaagg cgaaanaang agctatcccg     540

agagccttcc agaaaggntg tgtcatttcg tncaacaaag tgagttacat gccatcatct     600

ttgttggatg tgcttcccca aagttccaac acaccgtcgn aattggcata tanatattgc     660

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         35   40   45

Val Val Gly Gly His Ala Gly Val Thr Ile Leu Pro Leu Leu Ser Gln
     50   55   60

Val Ser Pro Pro Cys Ser Phe Thr Pro Glu Glu Ile Ser Tyr Leu Thr
65   70   75   80

Ser Arg Ile Gln Asn Gly Gly Thr Glu Val Val Glu Ala Lys Ala Gly
                 85   90   95

Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala Ala Lys Phe Ala
             100   105   110

Asp Ala Cys Leu Arg Gly Leu His Gly Asp Ala Gly Ile Val Glu Cys
         115   120   125

Ser Tyr Val Asp Ser Gln Val Thr Gly Thr Ala Phe Phe Ala Ser Lys
     130   135   140

Val Arg Leu Gly Arg Ser Gly Val Glu Glu Ile Leu Gln Leu Gly Ser
145   150   155   160

Thr Glu Pro Gly Phe Glu Arg Xaa Gly Leu Glu Xaa Gly Glu Xaa Xaa
                 165   170   175

Ser Tyr Pro Glu Ser Leu Pro Glu Arg Xaa Cys His Phe Xaa Gln Gln
             180   185   190

Ser Glu Leu His Ala Ile Ile Phe Val Gly Cys Ala Ser Pro Lys Phe
         195   200   205

Gln His Thr Val Xaa Ile Gly Ile Xaa Ile Leu Leu Val Trp Gly Leu
     210   215   220

Leu Xaa Xaa Cys Lys Gln Ala Thr Xaa Trp Val Gly Gly Val Arg Xaa
225   230   235   240

Glu Lys Leu Leu Thr Phe Phe Thr Val Xaa Asn Lys Xaa Xaa Glu
                 245   250   255

Lys Pro Glu Xaa Tyr Met Ile Xaa Glu Xaa Ser Xaa Xaa Lys Lys
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260   265   270

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acaactcttg atgtagcgag ggctaacacc tttgtggctg aagtgcttgg agntgatcct       240

agagaagnca gtgttccggn tgttggcggg catgcaggga tcactatatt gcccctcctg       300

ncccaggtca gcccccccgtg ctcattcact ccagatgaaa tcagctattt gactaaccgc       360

atacagaatg gcggtaccga agttgttgag gcaaaggctg gagcaggctc tgcaactttg       420
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gactttgaga gagctggcct ggagaaggcg aanaaggagc tcagcgagag catccagaag    660

ggtgtggcgt tcatgaacaa gtgagatcat atgaatggat ggatacccccg caacctatac    720

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Pro Ile Ala Ala Glu Xaa Phe Lys Arg Ala Gly Thr Tyr Cys Pro Lys
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Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro Leu Leu Xaa Gln Val
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Ser Pro Pro Cys Ser Phe Thr Pro Asp Glu Ile Ser Tyr Leu Thr Asn
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Tyr Val Ala Ser Glu Val Thr Glu Leu Pro Phe Phe Ala Thr Lys Val
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Asn Asp Phe Glu Arg Ala Gly Leu Glu Lys Ala Xaa Lys Glu Leu Ser
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agagaagnca gtgttccggn tgttggcggg catgcnggga tcactatatt gcccctcctg       300

ncccaggtca gcccccccgtg ctcattcact ccagatgaaa tcagctattt gactaaccgc       360

atacagaatg gcggtaccga agttgttgag gcaaaggctg gagcaggctc tgcaactttg       420

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acaaaagtga ggttaggtcg tggcggagct gaggagatcc tccctcttgg gccactgaat       600

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agaagtcagt gttccggttg ttggcgggca tgcagggatc actatattgc ccctcctgtc      300

ccaggtcagc cccccgtgct cattcactcc agatgaaatc agctatttga ctaaccgcat      360

acagaatggc ggtaccgaag ttgttgaggc aaaggctgga gcaggctctg caactttgtc      420

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tctctcttct actcaagacg agccccctca tcgatgagct tgccctctac gatgttgtca      180

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M80678527.ST25

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gaattgtcaa gggtctgatt gaggttgccg ccgaagttgc ccccaaggcc ttcattctgg      420

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            20              25              30


Ala Gly Gly Ile Gly Gln Pro Leu Ser Leu Leu Leu Lys Thr Ser Pro
        35              40              45


Leu Ile Asp Glu Leu Ala Leu Tyr Asp Val Val Asn Thr Pro Gly Val
    50              55              60


Ala Ala Asp Leu Ser His Ile Ser Ser Arg Ala Gln Ile Ala Gly Tyr
65              70              75              80


Leu Pro Lys Asp Asp Gly Ala Lys Ala Ala Phe Lys Asp Ala Asp Ile
            85              90              95


Ile Val Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr Arg Asp
            100             105             110


Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys Gly Leu Ile Glu Val
            115             120             125


Ala Ala Glu Val Ala Pro Lys Ala Phe Ile Leu Val Ile Ser Asn Pro
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M80678527.ST25
130   135   140

Val Asn Ser Thr Val Pro Ile Ser Ala Glu Val Leu Lys Ala Lys Gly
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Val Phe Asn Pro Gln Arg Leu Phe Gly Val Thr Thr Leu Asp Ile Val
165   170   175

Arg Ala Glu Thr Phe Val Ala Ser Ile Thr Gly Glu Lys Gln Pro Gln
180   185   190

Asn Leu Thr Val Pro Val Ile Gly Gly His Ser Gly Glu Thr Ile Val
195   200   205

Pro Leu Phe Ser Lys Xaa Gln Pro Ser Ala Xaa Ile Pro
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ggaacccctg agggaacatt tgtttccatg ggtgtgtatt ctgatggttc atacggtgtg   960
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caagggctcc cgatcgacga gttctcaaga aagaagatgg atgccacagc ccaggagctc    1080

tcggaggaga aggctctcgc ctactcgtgc ctcgagtaac tgcataccag ggagcagctg    1140

ccgctctgat gttttgaata aaaggaacat tttggctcca tgaaactcat ctccactcag    1200

aacagttgca catcgcggtg cctttagctg gtttttccag tgtgtatgaa tgaggctttt    1260

gtagctctat tttcgcctga tgatttacag gacaggatat tggcaggaag attggaacaa    1320

tttgacgtct gattaaaacc aacctcttat tattcctgtg tgtatgaatg aggcttttgt    1380

agctctattt tcgcctgatg atttacaggc catgatattg gcaggaggat tggaacaatt    1440

tgacgcctga ttaaaaccaa cctcttatta ctaaaaaaaa aaaa                    1484
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<210> 47
<211> 333
<212> PRT
<213> Lolium perenne

<400> 47

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Gln Ile Gly Tyr Ala Leu Val Pro Met Ile Ala Arg Gly Ile Met Leu
                20                  25                  30


Gly Ala Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala
            35                  40                  45


Ala Glu Ala Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe
        50                  55                  60


Pro Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys
65                  70                  75                  80


Thr Gly Val Asn Val Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu
                85                  90                  95


Gly Met Glu Arg Lys Asp Val Met Ser Lys Asn Val Ser Ile Tyr Lys
                100                 105                 110


Ser Gln Ala Ser Ala Leu Glu Ala His Ala Ala Pro Asn Cys Lys Val
            115                 120                 125


Leu Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu
        130                 135                 140


Phe Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Cys Leu Thr Arg Leu
145                 150                 155                 160


Asp His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asp Val Gln
                165                 170                 175
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Val Ser Asp Val Lys Asn Val Ile Ile Trp Gly Asn His Ser Ser Ser
        180   185   190

Gln Tyr Pro Asp Val Asn His Ala Thr Val Lys Thr Ser Ser Gly Glu
        195   200   205

Lys Pro Val Arg Glu Leu Val Lys Asp Asp Glu Trp Leu Asn Ala Gly
    210   215   220

Phe Ile Ala Thr Val Gln Gln Arg Gly Ala Ala Ile Ile Lys Ala Arg
225   230   235   240

Lys Leu Ser Ser Ala Leu Ser Ala Ala Ser Ser Ala Cys Asp His Ile
                245   250   255

Arg Asp Trp Val Leu Gly Thr Pro Glu Gly Thr Phe Val Ser Met Gly
            260   265   270

Val Tyr Ser Asp Gly Ser Tyr Gly Val Pro Ala Gly Leu Ile Tyr Ser
        275   280   285

Phe Pro Val Thr Cys Cys Gly Gly Glu Trp Thr Ile Val Gln Gly Leu
    290   295   300

Pro Ile Asp Glu Phe Ser Arg Lys Lys Met Asp Ala Thr Ala Gln Glu
305   310   315   320

Leu Ser Glu Glu Lys Ala Leu Ala Tyr Ser Cys Leu Glu
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<210> 48
<211> 770
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>
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<222> (687)..(687)
<223> n is a, c, g, or t

<400> 48

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tcgtcgcctc ctcccgaacc actctcccca tccccgaact ccagaaccgg ctccaatggc     120

ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg gatatgctct     180

tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta ttctgcatat     240

gctggatatt ccaccagctg ctgaagctct taatggtgtt aagatggagt tggttgatgc     300

cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg cttgcactgg     360

tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag gagggaatgg aaaggaagga     420

tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg aagcccatgc     480

agccccgaat tgcaaggttc tggttgttgc caatccagca aacaccaatg ctcttatctt     540

aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgaccc gcctagacca     600

taacagggca cttggtcaga tctctgagag acttgatgnc caagttagtg atgtgaanaa     660

tgttatcatc tggggcaatc actcttncag tcagtaccct gatgtgaacc acgccaccgt     720

gaagacttcc agtgccgaga agcctgttcg cgaacttgtt aaagacgatg                770
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<210>   49
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<212>   DNA
<213>   Lolium perenne


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<222> (274)..(274)
<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

<220>
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<222> (327)..(327)
<223> n is a, c, g, or t

<220>
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<222> (329)..(329)
<223> n is a, c, g, or t

<400> 49
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cgaactccag aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc     120

gccgtaggac aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt     180

gcggaccagc ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat     240

ggtgttaaga tggagttggt tgatgccgna tttncacttt tnaagggagt tgttgcaaca     300

actgatgttg ttgaggcttg cactggngng aatgt                               335


<210> 50
<211> 282
<212> DNA
<213> Lolium perenne


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<223> n is a, c, g, or t

<220>
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<222> (10)..(10)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223>   n is a, c, g, or t

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aactccagaa ccggctccaa tggcggcgaa ggaaccgatg cgcgtgctcg tcaccggcgc   120

cgcaggacaa attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc   180

ggaccagcct gttattctgc atatgctgga tattgcacca gctgctgaag ctcttaatgg   240

cgttaacatg gaagtgnntn ggcggcntag nnctttntcg cn   282

<210>   51
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<212>   DNA
<213>   Lolium perenne

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<220>
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<223>  n is a, c, g, or t

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<220>
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<222>  (194)..(194)
<223>  n is a, c, g, or t

<400>  51
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tccagaaccg gctccaatgg cggcgaagga accgatgcgc gtgctcgtca ccggcgccgc     120

aggacaaatt ggatatgctc ttgttccgat gattgctagg cnaattatgc ttggngtgca     180

ctagcctgtt attntgcata tc                                              202


<210>  52
<211>  650
<212>  DNA
<213>  Lolium perenne


<220>
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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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<222>  (13)..(13)
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t
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ccagaaccgg ctccaatggc ggcgaagnaa ccgatgcgcg tgctcgtcac cggcgccgca       120

ggacaaattg gatatgctct tgttccgatg attgctaggg gaattatgct tggtgtggac       180

cagcctgtta ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt       240

aagatggagt tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat       300

gttgttgagg cttgcactgg tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag       360

gagggaatgg aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca       420

tctgcccttg aagcccatgc agccccgaat tgcaaggttc tggttgttgc caatccagca       480

aacaccaatg ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt       540

tgtttgaccc gcctagacca taacagggca cttggtcaga tctctgagag acttgatgcc       600

caagttagtg atgtgaagaa tgttatcatc tggggcaatc actcttccag                  650
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<210>   53
<211>   660
<212>   DNA
<213>   Lolium perenne


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<223>   n is a, c, g, or t

<220>
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<222>   (5)..(5)
<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<221>   misc_feature
<222>   (37)..(37)
<223>   n is a, c, g, or t
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agaaccggct ccaatggcgg cgaaggaacc gatgcgcgtg ctcgtcaccg gcgccgcagg       120

acaaattgga tatgctcttg ttccgatgat tgctagggga attatgcttg gtgcggacca       180

gcctgttatt ctgcatatgc tggatattcc accagctgct gaagctctta atggtgttaa       240

gatggagttg gttgatgccg catttccact tctcaaggga gttgttgcaa caactgatgt       300

tgttgaggct tgcactggtg tgaatgttgc ggttatggtt ggtggattcc ccaggaagga       360

gggaatggaa aggaaggatg ttatgtctaa gaatgtttca atctacaaat ctcaagcatc       420

tgcccttgaa gcccatgcag ccccgaattg caaggttctg gttgttgcca atccagcaaa       480

caccaatgct cttatcttaa aggagtttgc tccatctatt cctgagaaga acatcagttg       540
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tttgacccgc ctagaccata acagggcact tggtcagatc tctgagagac ttgatgtcca      600

agttagtgat gtgaagaatg ttatcatctg gggcaatcac tcttccagtc agtaccctga      660
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<210> 54
<211> 693
<212> DNA
<213> Lolium perenne

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<222> (24)..(24)
<223> n is a, c, g, or t

<220>
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<222> (443)..(443)
<223> n is a, c, g, or t

<220>
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<222> (524)..(524)
<223> n is a, c, g, or t

<220>
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<222> (533)..(533)
<223> n is a, c, g, or t

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<222> (569)..(569)
<223> n is a, c, g, or t

<220>
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<222> (591)..(591)
<223> n is a, c, g, or t

<220>
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<222> (600)..(600)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (614)..(614)
<223> n is a, c, g, or t

<220>
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<222> (660)..(660)
<223> n is a, c, g, or t

<220>
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<222> (675)..(676)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (680)..(680)
<223> n is a, c, g, or t

<400> 54

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aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac     120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc     180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga     240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgacgttg     300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg     360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg     420

cccttgaagc ccatgcagcc ccnaattgca aggttctggt tgttgccaat ccagcaaaca     480

ccaatgctct tatcttaaag gagtttgctc catctattcc tganaagaac atnagttgtt     540

tgacccgcct agaccataac agggcactng gtcagatctc tgagagactt natgtccaan   . 600

ttagtgatgt gaanaatgtt atcatctggg gtaatcaccc ttccagtcaa taccctgatn     660

tgaaccaccc ccccnnaaan acttccaggg cga                                  693
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<210>   55
<211>   793
<212>   DNA
<213>   Lolium perenne


<220>
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<223>   n is a, c, g, or t

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cagaaccggc tccaatggcg gcgaaggaac cgatgcgcgt gctcgtcacc ggcgccgcag     120

gacaaattgg atatgctctt gttccgatga ttgctagggg aattatgctt ggtgcggacc     180

agcctgttat tctgcatatg ctggatattc caccagctgc tgaagctctt aatggtgtta     240

agatggagtt ggttgatgcc gcatttccac ttctcaaggg agttgttgca acaactgatg     300

ttgttgaggc ttgcactggt gtgaatgttg cggttatggt tggtggattc cccaggaagg     360

agggaatgga aaggaaggat gttatgtcta agaatgtttc aatctacaaa tctcaagcat     420

ctgcccttga agcccatgca gccccgaatt gcaaggttct ggttgttgcc aatccagcaa     480

acaccaatgc tcttatctta aaggagtttg ctccatctat tcctgagaag aacatcagtt     540

gtttgacccg cctagaccat aacagggcac ttggtcagat ctctgagaga cttgatgtcc     600

aagttagtga tgtgaagaat gttatcatct ggggcaatca ctcttccagt cagtaccctg     660

atgtgaacca cgccaccgtg aagacttcca gtggcagaa gcctgttcgc gaacttgtta     720

aagacgatga atggctaaat gcagggntca ttgccactgt ccagcagcgt ggtgctgcaa     780

tcatcaaagc gag                                                        793
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<210>   56
<211>   797
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<212>   DNA
<213>   Lolium perenne

<220>
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<222>   (744)..(744)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (773)..(773)
<223>   n is a, c, g, or t

<220>
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<222>   (790)..(790)
<223>   n is a, c, g, or t

<400>   56

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gctatccttc atcccgttgt cgtcgcctcc tcccgaacca ctctccccat ccccgaactc      60
cagaaccggc tccaatggcg gcgaaggaac cgatgcgcgt gctcgtcacc ggcgccgcag     120
gacaaattgg atatgctctt gttccgatga ttgctagggg aattatgctt ggtgcggacc     180
agcctgttat tctgcatatg ctggatattc caccagctgc tgaagctctt aatggtgtta     240
agatggagtt ggttgatgcc gcatttccac ttctcaaggg agttgttgca acaactgatg     300
ttgttgaggc ttgcactggt gtgaatgttg cgtttatggt tggtggattc cccaggaagg     360
agggaatgga aaggaaggat gttatgtcta agaatgtttc aatctacaaa tctcaagcat     420
ctgcccttga agcccatgca gccccgaatt gcaaggttct ggttgttgcc aatccagcaa     480
acaccaatgc tcttatctta aaggagtttg ctccatctat tcctgagaag aacatcagtt     540
gtttgacccg cctagaccat aacagggcac ttggtcagat ctctgagaga cttgatgtcc     600
aagttagtga tgtgaagaat gttatcatct ggggcaatca ctcttccagt cagtaccctg     660
atgtgaacca cgccaccgtg aagacttcca ggggcgagaa gcctgttcgc gaacttgtta     720
aagacgatga atggctaaat gcangggtca ttgccactgt ccagcagcgt ggngctgcaa     780
tcatcaaagn gaggaac                                                   797
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<210>   57
<211>   684
<212>   DNA
<213>   Lolium perenne

<220>
<221>   misc_feature
<222>   (1)..(1)
<223>   n is a, c, g, or t

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<222>   (8)..(8)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (681)..(681)
<223>  n is a, c, g, or t

<400>  57
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gaaccggctc caatggcggc gaaggaaccg atgcgcgtgc tcgtcaccgg cgccgcagga     120

caaattggat atgctcttgt tccgatgatt gctaggggaa ttatgcttgg tgcggaccag     180

cctgttattc tgcatatgct ggatattcca ccagccgctg aagctcttaa tggtgttaag     240

atggagttgg ttgatgccgc atttccactt ctcaagggag ttgttgcaac aactgatgtt     300

gttgaggctt gcactggtgt gaatgttgcg gttatggttg gtggattccc caggaaggag     360

ggaatggaaa ggaaggatgt tatgtctaag aatgtttcaa tctacaaatc tcaagcatct     420

gcccttgaag cccatgcagc cccgaattgc aaggttctgg ttgttgccaa tccagcaaac     480

accaatgctc ttatcttaaa ggagtttgct ccatctattc ctgagaagaa catcagttgt     540

ttgacccgcc tagaccataa cagggcactt ggtcagatct ctgagagact tgatgtccaa     600

gttagtgatg tgaagaatgt tatcatctgg ggcaatcact cttccagtca gtaccctgat     660

gtgaaccacg ccaccgtgaa nact                                           684


<210>  58
<211>  707
<212>  DNA
<213>  Lolium perenne


<220>
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<222>  (2)..(3)
<223>  n is a, c, g, or t

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agaaccggct ccaatggcgg cgaaggaacc gatgcgcgtg ctcgtcaccg gcgccgcagg     120

acaaattgga tatgctcttg ttccgatgat tgctagggga attatgcttg gtgcggacca     180

gcctgttatt ctgcatatgc tggatattcc accagctgct gaagctctta atggtgttaa     240

gatggagttg gttgatgccg catttccact tctcaaggga gttgttgcaa caactgatgt     300

tgttgaggct tgcactggtg tgaatgttgc ggttatggtt ggtggattcc ccaggaagga     360

gggaatggaa aggaaggatg ttatgtctaa gaatgtttca atctacaaat ctcaagcatc     420

tgcccttgaa gcccatgcag ccccgaattg caaggttctg gttgttgcca atccagcaaa     480

caccaatgct cttatcttaa aggagtttgc tccatctatt cctgagaaga acatcagttg     540

tttgacccgc ctagaccata acagggcact tggtcagatc tctgagagac ttgatgtcca     600

agttagtgat gtgaagaatg ttatcatctg gggcaatcac tcttccagtc agtaccctga     660

tgtgaaccac gccaccgtga agacttccag tggcgagaag cctgttc                   707
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<210> 59
<211> 801
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (685)..(685)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (799)..(799)
<223> n is a, c, g, or t

<400> 59

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ctatccttat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag      60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac     120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc     180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga     240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg     300

ttgaggcttg cactggtgtg aatgttgcgt ttatggttgg tggattcccc aggaaggagg     360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg     420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca     480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt     540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag     600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg     660

tgaaccacgc caccgtgaag acttncagtg gcgagaagcc tgttcgcgaa cttgttaaag     720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca     780

tcaaagcgag gaagctctnc a                                               801
```

<210> 60
<211> 563
<212> DNA
<213> Lolium perenne

<400> 60
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gatccttatc ccgttgtcgt cgcctcctcc cgaccactct ccccatcccc gaactccaga      60

accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca     120

aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc     180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat     240

ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt     300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg     360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc     420
```

M80678527.ST25
```
ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac    480

caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt    540

gacccgccta gaccataaca ggc                                            563
```

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<210>  61
<211>  692
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (2)..(3)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (34)..(34)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (692)..(692)
<223>  n is a, c, g, or t

<400>  61
gnnaccttct cccgttgtcg tcgcctcctc ccgnaccact ctcccctccc cgaactccag    60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac   120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc   180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga   240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg    300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg   360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg   420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca   480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt   540

tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt gatgtccaag   600

ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa taccctgatg   660

tgaaccacgc caccgtgaag acttccagtg gn                                  692
```

```
<210>  62
<211>  764
<212>  DNA
<213>  Lolium perenne

<400>  62
gatccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag    60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac   120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc   180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga   240
```

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```
                              M80678527.ST25
tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg      300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg      360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg      420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca      480

ccaatgctct tatcttaaag gagttcgctc catctattcc tgagaagaac atcagttgtt      540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag      600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg      660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag      720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcag                       764
```

<210> 63
<211> 769
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<400> 63
```
gntccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag       60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac      120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc      180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga      240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg      300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg      360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg      420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca      480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt      540

tgacccgcct agaccataac agggcactcg gtcagatctc tgagaggctt gatgtccaag      600

ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa taccctgatg      660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag      720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtgg               769
```

<210> 64
<211> 770
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (763)..(763)
<223> n is a, c, g, or t

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<400> 64

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gatccttatc ccgttgtcgt cgcctcctcc cgaccactct ccccatcccc gaactccaga    60

accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca   120

aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc   180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat   240

ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt   300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg   360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc   420

ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc agcaaacac    480

caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt   540

gacccgccta gaccataaca gggcacttgg tcagatctct gagagacttg atgtccaagt   600

tagtgatgtg aagaatgtta tcatctgggg caatcactct tccagtcagt accctgatgt    660

gaaccacgcc accgtgaaga cttccagtgg cgagaagcct gttcgcgaac ttgttaaaga   720

cgatgaatgg ctaaatgcag ggttcattgc cactgtccag cancgtggtg              770
```


<210> 65
<211> 779
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<400> 65

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gntccctcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag    60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac   120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc   180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga   240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcgaca actgatgttg   300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg   360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg   420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagtaaaca   480

ccaatgctct tatcctaaag gagtttgctc catctattcc tgagaagaac atcagttgtt   540

tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt gatgtccaag   600

ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa taccctgatg   660

tgaaccacgc caccgtgaag acttccagtg cgagaagcc tgttcgcgaa cttgttaaag   720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatc   779
```

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<210> 66
<211> 788
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (643)..(643)
<223> n is a, c, g, or t

<400> 66
gnnccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag   60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac   120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc   180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga   240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg   300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg   360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatccg   420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca   480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt   540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag   600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttncagtcag taccctgatg   660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag   720

acgatgaatg gctaaatgca gggttcattg ccactgtcca acagcgtggt gctgcaatca   780

tcaaagcg   788

<210> 67
<211> 794
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (8)..(8)
<223> n is a, c, g, or t

<400> 67
gttccttntc ccgttgtcgt cgcctcctcc cgaccactct ccccatcccc gaactccaga   60

accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca   120

aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc   180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat   240

ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt   300

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```
tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg    360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc    420

ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac    480

caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt    540

gacccgccta gaccataaca gggcactcgg tcagatctct gagaggcttg atgtccaagt    600

tagtgatgtg aagaatgtta tcatctgggg taatcactct tccagtcaat accctgatgt    660

gaaccacgcc accgtgaaga cttccagtgg cgagaagcct gttcgcgaac ttgttaaaga    720

cgatgaatgg ctaaatgcag ggttcattgc cactgtccag cagcgtggtg ctgcaatcat    780

caaagcgagg aagc                                                     794
```

<210> 68
<211> 797
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (489)..(489)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (734)..(734)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (757)..(757)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (776)..(776)
<223> n is a, c, g, or t

<400> 68
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gntccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag     60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac    120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc    180

ctgttattct gcatatgctg gatattccac cagctgctga agctcttaat ggtgttaaga    240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg    300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg    360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatccg    420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca    480

ccaatgctnt tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt    540
```

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tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag   600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg   660

tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag   720

acgatgaatg gctnaatgca gggttcattg ccactgncca gcagcgtggt gctgcnatca   780

tcaaagcgag gaagctt   797

<210>   69
<211>   802
<212>   DNA
<213>   Lolium perenne

<220>
<221>   misc_feature
<222>   (222)..(222)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (685)..(685)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (770)..(770)
<223>   n is a, c, g, or t

<400>   69
gatccttcat cccgttgtcg tcgcctcctc ccgaccactc tccccatccc cgaactccag   60

aaccggctcc aatggcggcg aaggaaccga tgcgcgtgct cgtcaccggc gccgcaggac   120

aaattggata tgctcttgtt ccgatgattg ctaggggaat tatgcttggt gcggaccagc   180

ctgttattct gcatatgctg gatattccac cagctgctga anctcttaat ggtgttaaga   240

tggagttggt tgatgccgca tttccacttc tcaagggagt tgttgcaaca actgatgttg   300

ttgaggcttg cactggtgtg aatgttgcgg ttatggttgg tggattcccc aggaaggagg   360

gaatggaaag gaaggatgtt atgtctaaga atgtttcaat ctacaaatct caagcatctg   420

cccttgaagc ccatgcagcc ccgaattgca aggttctggt tgttgccaat ccagcaaaca   480

ccaatgctct tatcttaaag gagtttgctc catctattcc tgagaagaac atcagttgtt   540

tgacccgcct agaccataac agggcacttg gtcagatctc tgagagactt gatgtccaag   600

ttagtgatgt gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg   660

tgaaccacgc caccgtgaag acttncagtg gcgagaagcc tgttcgcgaa cttgttaaag   720

acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggn gctgcatcat   780

caaagcgagg aagctcttca gt   802

<210>   70
<211>   315
<212>   DNA
<213>   Lolium perenne

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<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (7)..(7)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (13)..(13)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (153)..(153)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (257)..(257)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (302)..(302)
<223>  n is a, c, g, or t

<400>  70
gnccttnatc ccnttgtcgt cgcctcctcc cgaccactct ccccatcccc gaactccaga      60

accggctcca atggcggcca aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca     120

aattggatat gctcttgttc cgatgattgc tangggaatt atgcttggtg cggaccagcc     180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat     240

ggagttggtt gatgccncat ttccacttct caagggagtt gttgcaacaa ctgatgttgt     300

tnaggcttgc actgg                                                      315
```

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<210>  71
<211>  525
<212>  DNA
<213>  Lolium perenne

<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (26)..(26)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
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<222>   (78)..(78)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (269)..(269)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (493)..(493)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (515)..(515)
<223>   n is a, c, g, or t

<400>   71
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accggctcca atggcggnga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca     120

aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc     180

tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat     240

ggagttggtt gatgccgcat ttccacttnt caagggagtt gttgcaacaa ctgatgttgt     300

tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg     360

aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc     420

ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac     480

caatgctctt atnttaaagg agtttgctcc atctnttcct gagaa                     525
```

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<210>   72
<211>   696
<212>   DNA
<213>   Lolium perenne

<220>
<221>   misc_feature
<222>   (7)..(7)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (547)..(547)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (603)..(603)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (613)..(613)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (632)..(632)
<223>   n is a, c, g, or t
```

M80678527.ST25

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<400>  73
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ccggctccaa tggcggcgaa ggaaccgatg cgcgtgctcg tcaccggcgc cgcaggacaa     120
attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc ggaccagcct     180
gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgttaagatg     240
gagttggttg atgccgcatt tccacttctc aagggagttg ttgcaacaac tgatgttgtt     300
gaggcttgca ctggtgtgaa tgttgcggtt atggttggtg gattccccag gaaggaggga     360
atggaaagga aggatgttat gtctaagaat gtttcaatct acaaatctca agcatctgcc     420
cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacacc     480
aatgctctta tcttaaagga gtttgctcca tctattcctg agaagaacat cagttgtttg     540
acccgcctag accataacag ggcacttggt cagatctctg agagacttga tgtccaagtt     600
agtgatgtga aaaatgttat catctggggc aatcactctt ccagtc                    646
```

```
<210>  74
<211>  711
<212>  DNA
<213>  Lolium perenne
```

```
<220>
<221>  misc_feature
<222>  (8)..(8)
<223>  n is a, c, g, or t
```

```
<220>
<221>  misc_feature
<222>  (642)..(642)
<223>  n is a, c, g, or t
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```
<220>
<221>  misc_feature
<222>  (679)..(679)
<223>  n is a, c, g, or t
```

```
<400>  74
accttctncc cgttgtcgtc gcctcctccc gaaccactct ccccatcccc gaactccaga      60
accggctcca atggcggcga aggaaccgat gcgcgtgctc gtcaccggcg ccgcaggaca     120
aattggatat gctcttgttc cgatgattgc taggggaatt atgcttggtg cggaccagcc     180
tgttattctg catatgctgg atattccacc agctgctgaa gctcttaatg gtgttaagat     240
ggagttggtt gatgccgcat ttccacttct caagggagtt gttgcaacaa ctgatgttgt     300
tgaggcttgc actggtgtga atgttgcggt tatggttggt ggattcccca ggaaggaggg     360
aatggaaagg aaggatgtta tgtctaagaa tgtttcaatc tacaaatctc aagcatctgc     420
ccttgaagcc catgcagccc cgaattgcaa ggttctggtt gttgccaatc cagcaaacac     480
caatgctctt atcttaaagg agtttgctcc atctattcct gagaagaaca tcagttgttt     540
gacccgccta gaccataaca gggcactcgg tcagatctct gagagacttg atgtccaagt     600
tagtgatgtg aagaatgtta tcatctgggg taatcactct tncagtcaat accctgatgt     660
```

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```
gaaccacgcc accgtgaana ctttcagtgg cgagaagcct gttcgcgaac t        711
```

```
<210>  75
<211>  768
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (6)..(6)
<223>  n is a, c, g, or t

<400>  75
tccttntccc gttgtcgtcg cctcctcccg accactctcc ccatccccga actccagaac    60

cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa   120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg   180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg   240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg   300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa   360

tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc   420

ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca   480

atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga   540

cccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta   600

gtgatgtgaa gaatgttatc atctggggca atcactcttc cagtcagtac cctgatgtga   660

accacgccac cgtgaagact tccagtggcg agaagcctgt tcgcgaactt gttaaagacg   720

atgaatggct aaatgcaggg ttcattgcca ctgtccagca gcgtggtg              768


<210>  76
<211>  783
<212>  DNA
<213>  Lolium perenne

<400>  76
tccttatccc gttgtcgtcg cctcctcccg accactctcc ccatccccga actccagaac    60

cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa   120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg   180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg   240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg   300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa   360

tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc   420

ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca   480

atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga   540

cccgcctaga ccataacagg gcacttggtc agatctctga gagacttgat gtccaagtta   600
```

M80678527.ST25

```
gtgatgtgaa  gaatgttatc  atctggggca  atcactcttc  cagtcagtac  cctgatgtga   660

accacgccac  cgtgaagact  tccagtggcg  agaagcctgt  tcgcgaactt  gttaaagacg   720

atgaatggct  aaatgcaggg  ttcattgcca  ctgtccagca  gcgtggtgct  gcaatcatca   780

aag                                                                      783
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<210>  77
<211>  803
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (7)..(7)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (713)..(713)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (797)..(797)
<223>  n is a, c, g, or t

<400>  77
tccttcntcc  cgttgtcgtc  gcctcctccc  gaccactctc  cccatccccg  aactccagaa    60

ccggctccaa  tggcggcgaa  ggaaccgatg  cgcgtgctcg  tcaccggcgc  cgcaggacaa   120

attggatatg  ctcttgttcc  gatgattgct  aggggaatta  tgcttggtgc  ggaccagcct   180

gttattctgc  atatgctgga  tattccacca  gctgctgaag  ctcttaatgg  tgttaagatg   240

gagttggttg  atgccgcatt  tccacttctc  aagggagttg  ttgcaacaac  tgatgttgtt   300

gaggcttgca  ctggtgtgaa  tgttgcggtt  atggttggtg  gattccccag  gaaggaggga   360

atggaaagga  aggatgttat  gtctaagaat  gtttcaatct  acaaatctca  agcatctgcc   420

cttgaagccc  atgcagcccc  gaattgcaag  gttctggttg  ttgccaatcc  agcaaacacc   480

aatgctctta  tcttaaagga  gtttgctcca  tctattcctg  agaagaacat  cagttgtttg   540

acccgcctag  accataacag  ggcactcggt  cagatctctg  agaggcttga  tgtccaagtt   600

agtgatgtga  agaatgttat  catctggggt  aatcactctt  ccagtcaata  ccctgatgtg   660

aaccacgcca  ccgtgaagac  ttccagtggc  gagaagcctg  ttcgcgaact  tgntaaagac   720

gatgaatggc  taaatgcagg  gttcattgcc  actgtccagc  agcgtggtgc  tgcaatcatc   780

aaagcgagga  agctctncag  tgc                                              803
```

```
<210>  78
<211>  595
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
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M80678527.ST25

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<222>  (386)..(386)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (439)..(439)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (496)..(496)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (510)..(510)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (520)..(520)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (529)..(529)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (531)..(531)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (558)..(558)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (561)..(562)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (567)..(567)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (578)..(578)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (580)..(580)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (588)..(588)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (590)..(590)
<223>  n is a, c, g, or t
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M80678527.ST25

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<220>
<221>  misc_feature
<222>  (595)..(595)
<223>  n is a, c, g, or t

<400>  78
ccttcatccc gttgtcgtcg cctcctcccg accactctcc ccatccccga actccagaac      60

cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa     120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg     180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg     240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg     300

aggcttgcac tggtgtgaat gttgcggtta tggttggtgg attccccagg aaggagggaa     360

tggaaaggaa ggatgttatg tctaanaatg tttcaatcta caaatcttaa gcatctgccc     420

ttgaagccca tgcaccccna attgcaaggg tctggttgtt gccaatccag caaacaccaa     480

tgcttttatt ttaaangagt ttgctccatn tattcctgan aagaacatna nttgtttgac     540

ccgcctagac cataacangg nncttgncaa aatctttnan agacttgntn tcaan          595


<210>  79
<211>  696
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (1)..(1)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (11)..(11)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (120)..(120)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (335)..(335)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (387)..(387)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (482)..(482)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (603)..(603)
<223>  n is a, c, g, or t
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M80678527.ST25

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<220>
<221>  misc_feature
<222>  (608)..(608)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (612)..(612)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (674)..(674)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (689)..(689)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (695)..(696)
<223>  n is a, c, g, or t

<400>  79
nccttctccc nttgtcgtcg cctcctcccg aaccactctc cccatccccg aactccagaa       60
ccggctccaa tggcggcgaa ggaaccgatg cgcgtgctcg tcaccggcgc cgcaggacan      120
attggatatg ctcttgttcc gatgattgct aggggaatta tgcttggtgc ggaccagcct      180
gttattctgc atatgctgga tattccacca gctgctgaag ctcttaatgg tgttaagatg      240
gagttggttg atgccgcatt tccacttctc aagggagttg ttgcaacaac tgatgttgtt      300
gaggcttgca ctggtgtgaa tgttgcggtt atggntggtg gattccccag gaaggaggga      360
atggaaagga aggatgttat gtctaanaat gtttcaatct acaaatctca agcatctgcc      420
cttgaagccc atgcagcccc gaattgcaag gttctggttg ttgccaatcc agcaaacacc      480
antgctctta tcttaaagga gtttgctcca tctatccctg agaagaacat cagttgtttg      540
acccgcctag accataacag ggcacttggt cagatctctg agagacttga tgtccaagtt      600
agngatgnga anaatgttat catctggggc aatcactctt ccagtcagta ccctgatgtg      660
aaccacgcca ccgngaagac ttccagtgnc gagann                                696
```

```
<210>  80
<211>  779
<212>  DNA
<213>  Lolium perenne

<220>
<221>  misc_feature
<222>  (77)..(77)
<223>  n is a, c, g, or t

<400>  80
accttatccc gttgtcgtcg cctcctcccg accactctcc ccatccccga actccagaac       60
cggctccaac ggcggcnaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa      120
ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg      180
```

M80678527.ST25

```
ttattctgca  tatgctggat  attccaccag  ctgctgaagc  tcttaatggt  gttaagatgg    240

agttggttga  tgccgcattt  ccacttctca  agggagttgt  tgcaacgact  gatgttgttg    300

aggcttgcac  tggtgtgaat  gttgcggtta  tggttggtgg  attccccagg  aaggagggaa    360

tggaaaggaa  ggatgttatg  tctaagaatg  tttcaatcta  caaatctcaa  gcatctgccc    420

ttgaagccca  tgcagcccg   aattgcaagg  ttctggttgt  tgccaatcca  gcaaacacca    480

atgctcttat  cttaaaggag  tttgctccat  ctattcctga  gaagaacatc  agttgtttga    540

cccgcctaga  ccataacagg  gcacttggtc  agatctctga  gagacttgat  gtccaagtta    600

gtgatgtgaa  gaatgttatc  atctggggca  atcactcttc  cagtcagtac  cctgatgtga    660

accacgccac  cgtgaagact  tccagtggcg  agaagcctgt  tcgcgaactt  gttaaagacg    720

atgaatggct  aaatgcaggg  ttcattgcca  ctgtccagca  gcgtggtgct  gcaatcata    779
```

```
<210>    81
<211>    470
<212>    DNA
<213>    Lolium perenne


<220>
<221>    misc_feature
<222>    (4)..(4)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (44)..(44)
<223>    n is a, c, g, or t

<400>    81
cttnctcccg  ttgtcgtcgc  ctcctcccga  accactctcc  cctnccccga  actccagaac     60

cggctccaat  ggcggcgaag  gaaccgatgc  gcgtgctcgt  caccggcgcc  gcaggacaaa    120

ttggatatgc  tcttgttccg  atgattgcta  ggggaattat  gcttggtgcg  gaccagcctg    180

ttattctgca  tatgctggat  attccaccag  ctgctgaagc  tcttaatggt  gttaagatgg    240

agttggttga  tgccgcattt  ccacttctca  agggagttgt  tgcaacaact  gatgttgttg    300

aggcttgcac  tggtgtgaat  gttgcggtta  tggttggtgg  attccccagg  aaggagggaa    360

tggaaaggaa  ggatgttatg  tctaagaatg  tttcaatcta  caaatctcaa  gcatctgccc    420

ttgaagccca  tgcagcccg   aattgcaagg  ttctggttgt  tgccaatcca               470
```

```
<210>    82
<211>    599
<212>    DNA
<213>    Lolium perenne


<220>
<221>    misc_feature
<222>    (3)..(3)
<223>    n is a, c, g, or t

<220>
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<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (10)..(10)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (44)..(44)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (580)..(580)
<223> n is a, c, g, or t

<400> 82

ttnctnccgn ctgtcgtcgc ctcctcccga accactctcc cctnccccga actccaaacc   60

ggctccaatg gcggcgaagg aaccgatgcg cgtgctcgtc accggcgccg caggacaaat   120

tggatatgct cttgttccga tgattgctag gggaattatg cttggtgcgg accagcctgt   180

tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga   240

gttggttgat gccgcatttc cacttctcaa gggagttgtt gcaacaactg atgttgttga   300

ggcttgcact ggtgtgaatg ttgcggttat ggttggtgga ttccccagga aggagggaat   360

ggaaaggaag gatgttatgt ctaagaatgt ttcaatctac aaatctcaag catctgccct   420

tgaagcccat gcagccccga attgcaaggt tctggttgtt gccaatccag caaacaccaa   480

tgctcttatc ttaaaggagt ttgctccatc tattcctgag aagaacatca gttgtttgac   540

ccgcctagac cataacaggg cacttggtca gatctctgan agacttgatg tccaagtta   599

<210> 83
<211> 606
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (3)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (43)..(44)
<223> n is a, c, g, or t

<220>

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<221> misc_feature
<222> (545)..(545)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (569)..(569)
<223> n is a, c, g, or t

<400> 83
ttnctncccc cngtcgtcgc ctcctcccga accactctcc ccnnccccga actccagaac      60

cggctccaat ggcggcgaag gaaccgatgc gcgtgctcgt caccggcgcc gcaggacaaa     120

ttggatatgc tcttgttccg atgattgcta ggggaattat gcttggtgcg gaccagcctg     180

ttattctgca tatgctggat attccaccag ctgctgaagc tcttaatggt gttaagatgg     240

agttggttga tgccgcattt ccacttctca agggagttgt tgcaacaact gatgttgttg     300

aggcttgcac tggtgtgaat gctgcggtta tggttggtgg attccccagg aaggagggaa     360

tggaaaggaa ggatgttatg tctaagaatg tttcaatcta caaatctcaa gcatctgccc     420

ttgaagccca tgcagccccg aattgcaagg ttctggttgt tgccaatcca gcaaacacca     480

atgctcttat cttaaaggag tttgctccat ctattcctga gaagaacatc agttgtttga     540

cccgnctaga ccataacagg gcactcggnc agatctctga gagacttgat gtccaagtta     600

gtgatg                                                               606


<210> 84
<211> 686
<212> DNA
<213> Lolium perenne


<220>
<221> misc_feature
<222> (1)..(1)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (33)..(33)
<223> n is a, c, g, or t

<400> 84
nttcatcccg ttgtcgtcgc ctcctcccga acnctctccc catccccgaa ctccagaacc      60

ggctccaatg gcggcgaagg aaccgatgcg cgtgctcgtc accggcgccg caggacaaat     120

tggatatgct cttgttccga tgattgctag gggaattatg ctcggtgcgg accagcctgt     180

tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga     240

gttggttgat gccgcatttc cacttctcaa gggagttgtt gcaacaactg atgttgttga     300

ggcttgcact ggtgtgaatg ttgcggttat ggttggtgga ttccccagga aggagggaat     360

ggaaaggaag gatgttatgt ctaagaatgt ttcaatctac aaatctcaag catctgccct     420

tgaagccatg cagccccgaa ttgcaaggtt ctggttgttg ccaatccagc aaacaccaat     480

gctcttatct taaaggagtt tgctccatct attcctgaga agaacatcag ttgtttgacc     540
```

M80678527.ST25
```
cgcctagacc ataacagggc acttggtcag atctctgaga gacttgatgt ccaagttagt     600

gatgtgaaga atgttatcat ctggggcaat cactcttcca gtcagtaccc tgatgtgaac     660

cacgccaccg tgaagacttt cagtgg                                         686
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<210> 85
<211> 341
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (9)..(9)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (22)..(22)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (98)..(98)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (150)..(150)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (175)..(175)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (276)..(276)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (279)..(279)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (297)..(297)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (305)..(305)
<223> n is a, c, g, or t

<400> 85
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ttcatcccnt tgtcgtngcc tnctcccgaa ccactctccc cttccccgaa ctccagaacc     60

ggctccaatg gcggcgaagg aaccgatgcg cgtgctcntc accggcgccg caggacaaat    120
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M80678527.ST25

```
tggatatgct cttgttccga tgattgctan gggaattatg cttggtgcgg accancctgt    180

tattctgcat atgctggata ttccaccagc tgctgaagct cttaatggtg ttaagatgga    240

gttggttgat gccgcatttc cacttctcaa gggagntgnt gcaacaactg atgttgntga    300

ggctngcact ggtgtgaatg ttgcggttat ggatggtgga t                       341
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<210> 86
<211> 349
<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>
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<222> (345)..(345)

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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (348)..(349)
<223> n is a, c, g, or t

<400> 86
ttgatcccgt tgtcgtcgcc tcctcccgaa ccctctcccc atccccgaac tccagaaccg   60

gctccaatgg cggcgaagga accgatgcgc gtgctcgtca ccggcgccgc aggacaaatt   120

ggatatgctc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcctgtt   180

attctgcata tgcaggatat tccaccagct gctgaagctc ttaatggtgt taagatggag   240

ttggntgatg ccgcatttcc acttntcaag ggagttgntg caacaactga tgtngttgan   300

gcttgcactg gngtgaatgt tgcggnnntg ncnngcccan gtaanatnn   349

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<211> 605
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>
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<222> (567)..(567)
<223> n is a, c, g, or t

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<222> (572)..(572)
<223> n is a, c, g, or t

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<222>  (584)..(584)
<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
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<222>  (605)..(605)
<223>  n is a, c, g, or t

<400>  87
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gctccaatgg cggcgaagga accgatgcgc gtgctcgtca ccggcgccgc aggacaaatt       120

ggatatgctc ttgttccgat gattgctagg ggaattatgc ttggtgcgga ccagcccgtt       180

attctgcata tgctggatat tccaccagct gctgaagctc ttaatggtgt taagatggag       240

ttggttgatg ccgcatttcc acttctcaag ggagttgttg caacaactga tgttgttgag       300

gcttgcactg gtgtgaatgt tgcggttatg gttggtggat tccccaggaa ggagggaatg       360

gaaaggaagg atgttatgtc taagaatgtt tcaatctaca aatctcaagc atctgccctt       420

gaagcccatg cagccccgaa ttgcaaggtt ctggttgttg ccaatccagc aaacaccaat       480

gctcttatct taaaggagnt tgctccatct attcctgaga anaacatcag ntgtttgacc       540

cgcctagacc ataacaggnc actcggncag anctctgaga gacntgatgc ccaagntngn       600

gntgn                                                                   605


<210>  88
<211>  685
<212>  DNA
<213>  Lolium perenne

<220>
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<222>  (1)..(1)
<223>  n is a, c, g, or t

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nttatcccgt tgtcgtcgcc tcctcccgaa ccctctcccc atccccgaac tccgaaccgg        60

ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg       120
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gatatgctct  tgttccgatg  attgctaggg  gaattatgct  tggtgcggac  cagcctgtta    180

ttctgcatat  gctggatatt  ccaccagctg  ctgaagctct  taatggtgtt  aagatggagt    240

tggttgatgc  cgcatttcca  cttctcaagg  gagttgttgc  aacaactgat  gttgttgagg    300

cttgcactgg  tgtgaatgtt  gcggttatgg  ttggtggatt  ccccaggaag  gagggaatgg    360

aaaggaagga  tgttatgtct  aagaatgttt  caatctacaa  atctcaagca  tctgcccttg    420

aagcccatgc  agccccgaat  tgcaaggttc  tggttgttgc  caatccagca  aacaccaatg    480

ctcttatctt  aaaggagttt  gctccatcta  ttcctgagaa  gaacatcagt  tgtttgaccc    540

gcctagacca  taacagggca  cttggtcaga  tctctgagag  acttgatgtc  caagttagtg    600

atgtgaagaa  tgttatcatc  tgggcaaatc  actcttccag  tcagtaccct  gatgtgaacc    660

acgccaccgt  gaagacttcc  agtgg                                            685
```

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<210>  89
<211>  763
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (4)..(4)
<223>  n is a, c, g, or t

<400>  89
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gctccaatgg  cggcgaagga  accgatgcgc  gtgctcgtca  ccggcgccgc  aggacaaatt    120

ggatatgctc  ttgttccgat  gattgctagg  ggaattatgc  ttggtgcgga  ccagcctgtt    180

attctgcata  tgctggatat  tccaccagct  gctgaagctc  ttaatggtgt  taagatggag    240

ttggttgatg  ccgcatttcc  acttctcaag  ggagttgttg  caacaactga  tgttgttgag    300·

gcttgcactg  gtgtgaatgt  tgcggttatg  gttggtggat  tccccaggaa  ggagggaatg    360

gaaaggaagg  atgttatgtc  taagaatgtt  tcaatctaca  aatctcaagc  atctgccctt    420

gaagcccatg  cagccccgaa  ttgcaaggtt  ctggttgttg  ccaatccagc  aaacaccaat    480

gctcttatct  taaaggagtt  tgctccatct  attcctgaga  agaacatcag  ttgtttgacc    540

cgcctagacc  ataacagggc  acttggtcag  atctctgaga  gacttgatgt  ccaagttagt    600

gatgtgaaga  atgttatcat  ctggggcaat  cactcttcca  gtcagtaccc  tgatgtgaac    660

cacgccaccg  tgaagacttc  cagtggcgag  aagcctgttc  gcgaacttgt  taaagacgat    720

gaatggctaa  atgcagggtt  cattgccact  gtccagcagc  gtg                     763
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<210>  90
<211>  790
<212>  DNA
<213>  Lolium perenne


<220>
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```
<221>  misc_feature
<222>  (3)..(3)
<223>  n is a, c, g, or t

<400>  90
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ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg     120

gatatgctct tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta  .  180

ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt aagatggagt     240

tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg     300

cttgcactgg tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag gagggaatgg     360

aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg     420

aagcccatgc agccccgaat tgcaaggttc tggttgttgc caatccagca aacaccaatg     480

ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgaccc     540

gcctagacca taacagggca cttggtcaga tctctgagag acttgatgtc caagttagtg     600

atgtgaagaa tgttatcatc tggggcaatc actcttccag tcagtaccct gatgtgaacc     660

acgccaccgt gaagacttcc agtggcgaga agcctgttcg cgaacttgtt aaagacgatg     720

aatggctaaa tgcagggttc attgccactg tccagcagcg tggtgctgca atcatcaaag     780

cgaggaagct                                                         .  790
```

```
<210>  91
<211>  690
<212>  DNA
<213>  Lolium perenne

<220>
<221>  misc_feature
<222>  (678)..(678)
<223>  n is a, c, g, or t

<400>  91
ttctcccgtt gtcgtcgcct cctcccgacc actctcccct ccccgaactc cagaaccggc  .  60  .

tccaatggcg gcgaaggaac cgatgcgcgt gctcgtcacc ggcgccgcag gacaaattgg     120

atatgctctt gttccgatga ttgctagggg aattatgctt ggtgcggacc agcctgttat     180

tctgcatatg ctggatattc caccagctgc tgaagctctt aatggtgtta agatggagtt     240

ggttgatgcc gcatttccac ttctcaaggg agttgttgca acaactgatg ttgttgaggc     300

ttgcactggt gtgaatgttg cggttatggt tggtggattc cccaggaagg agggaatgga     360

aaggaaggat gttatgtcta agaatgtttc aatctacaaa tctcaagcat ctgcccttga     420

agcccatgca gccccgaatt gcaaggttct ggttgttgcc aatccagcaa acaccaatgc     480

tcttatctta aaggagtttg ctccatctat tcctgagaag aacatcagtt gtttgacccg     540

cctagaccat aacagggcac tcggtcagat ctctgagaga cttgatgtcc aagttagtga     600

tgtgaagaat gttatcatct ggggtaatca ctcttccagt caataccctg atgtgaacca     660
```

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```
cgccaccgtg aagacttnca gtggcgagaa                                690
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```
<210>   92
<211>   700
<212>   DNA
<213>   Lolium perenne


<220>
<221>   misc_feature
<222>   (679)..(679)
<223>   n is a, c, g, or t

<400>   92
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ctccaatggc ggcgaaggaa ccgatgcgcg tgctcgtcac cggcgccgca ggacaaattg   120

gatatgctct tgttccgatg attgctaggg gaattatgct tggtgcggac cagcctgtta   180

ttctgcatat gctggatatt ccaccagctg ctgaagctct taatggtgtt aagatggagt   240

tggttgatgc cgcatttcca cttctcaagg gagttgttgc aacaactgat gttgttgagg   300

cttgcactgg tgtgaatgtt gcggttatgg ttggtggatt ccccaggaag gagggaatgg   360

aaaggaagga tgttatgtct aagaatgttt caatctacaa atctcaagca tctgcccttg   420

aagcccatgc agccccgaat tgcaaggttc tggttgttgc caatccagca aacaccaatg   480

ctcttatctt aaaggagttt gctccatcta ttcctgagaa gaacatcagt tgtttgaccc   540

gcctagacca taacagggca ctcggtcaga tctctgagag acttgatgtc caagttagtg   600

atgtgaagaa tgttatcatc tggggtaatc actcttccag tcaataccct gatgtgaacc   660

acgccaccgt gaagacttnc agtggcgaga agcctgttcg                        700
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<210>   93
<211>   679
<212>   DNA
<213>   Lolium perenne


<220>
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<222>   (515)..(515)
<223>   n is a, c, g, or t

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<221>   misc_feature
<222>   (524)..(524)
<223>   n is a, c, g, or t

<220>
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<222>   (526)..(526)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (571)..(571)
<223>   n is a, c, g, or t

<220>
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<222>    (575)..(575)
<223>    n is a, c, g, or t

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<222>    (596)..(596)
<223>    n is a, c, g, or t

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<221>    misc_feature
<222>    (617)..(617)
<223>    n is a, c, g, or t

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<222>    (627)..(627)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (631)..(631)
<223>    n is a, c, g, or t

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<222>    (643)..(643)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (660)..(660)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (671)..(671)
<223>    n is a, c, g, or t

<400>    93
tcccgttgtc gtcgcctcct cccgaccact ctccccatcc ccgaactcca gaaccggctc      60

caatggcggc gaaggaaccg atgcgcgtgc tcgtcaccgg cgccgcagga caaattggat     120

atgctcttgt tccgatgatt gctaggggaa ttatgcttgg tgcggaccag cctgttattc     180

tgcatatgct ggatattcca ccagctgctg aagctcttaa tggtgttaag atggagttgg     240

ttgatgccgc atttccactt ctcaagggag ttgttgcaac aactgatgtt gttgaggctt     300

gcactggtgt gaatgttgcg gttatggttg gtggattccc caggaaggag ggaatggaaa     360

ggaaggatgt tatgtctaaa aatgtttcaa tctacaaatc tcaagcatct gcccttgaag     420

cccatgcagc cccgaattgc aaggttctgg ttgttgccaa tccagcaaac accaatgctt     480

ttatcttaaa ggagtttgct ccatctattc ctganaagaa catnanttgt ttgacccgcc     540

taaaccataa cagggcactt ggtcagatct ntganagact tgatggccaa gttagngatg     600

tgaaaaatgt tatcatntgg ggcaatnact nttccagtca gtnccctgat gtgaaccacn     660

cccccggaaa nacttccag                                                  679
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<210>    94
<211>    676
<212>    DNA
<213>    Lolium perenne
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<220>
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<222>  (27)..(27)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (676)..(676)
<223>  n is a, c, g, or t

<400>  94
cgttgtcgtc  gcctcctccc  gaccctnctc  ccctccccga  actccagaac  cggctccaat      60

ggcggcgaag  gaaccgatgc  gcgtgctcgt  caccggcgcc  gcaggacaaa  ttggatatgc     120

tcttgttccg  atgattgcta  ggggaattat  gcttggtgcg  gaccagcctg  ttattctgca     180

tatgctggat  attccaccag  ctgctgaagc  tcttaatggt  gttaagatgg  agttggttga     240

tgccgcattt  ccacttctca  agggagttgt  tgcaacaact  gatgttgttg  aggcttgcac     300

tggtgtgaat  gttgcggtta  tggttggtgg  attccccagg  aaggagggaa  tggaaaggaa     360

ggatgttatg  tctaagaatg  tttcaatcta  caaatctcaa  gtatctgccc  ttgaagccca     420

tgcagccccg  aattgcaagg  ttctggttgt  tgccaatcca  gcaaacacca  atgctcttat     480

cttaaaggag  tttgctccat  ctattcctga  gaagaacatc  agttgtttga  cccgcctaga     540

ccataacagg  gcacttggtc  agatctctga  gagacttgat  gtccaagtta  gtgatgtgaa     600

gaatgttatc  atctggggca  atcactcttc  cagtcagtac  cctgatgtga  accacgccac     660

cgtgaagact  tccagn                                                         676


<210>  95
<211>  786
<212>  DNA
<213>  Lolium perenne

<400>  95
ccgttgtcgt  cgcctcctcc  cgaaccactc  tccccatccc  cgaactccag  aaccggctcc      60

aatggcggcg  aaggaaccga  tgcgcgtgct  cgtcaccggc  gccgcaggac  aaattggata     120

tgctcttgtt  ccgatgattg  ctaggggaat  tatgcttggt  gcggaccagc  ctgttattct     180

gcatatgctg  gatattccac  cagctgctga  agctcttaat  ggtgttaaga  tggagttggt     240

tgatgccgca  tttccacttc  tcaagggagt  tgttgcaaca  actgatgttg  ttgaggcttg     300

cactggtgtg  aatgttgcgg  ttatggttgg  tggattcccc  aggaaggagg  gaatggaaag     360

gaaggatgtt  atgtctaaga  atgtttcaat  ctacaaatct  caagcatctg  cccttgaagc     420

ccatgcagcc  ccgaattgca  aggttctggt  tgttgccaat  ccagcaaaca  ccaatgctct     480

tatcttaaag  gagtttgctc  catctattcc  tgagaagaac  atcagttatt  tgacccgcct     540

agaccataac  agggcacttg  gtcagatctc  tgagagactt  gatgtccaag  ttagtgatgt     600

gaagaatgtt  atcatctggg  gcaatcactc  ttccagtcag  taccctgatg  tgaaccacgc     660

caccgtgaag  acttccagtg  gcgagaagcc  tgttcgcgaa  cttgttaaag  acgatgaatg     720
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gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca tcaaagcgag     780

gaagct                                                                786
```

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<210>   96
<211>   772
<212>   DNA
<213>   Lolium perenne
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<220>
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<222>   (29)..(29)
<223>   n is a, c, g, or t
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ggaccctctc cccatccccg aactccagna ccggctccaa tggcggcgaa ggaaccgatg      60

cgcgtgctcg tcaccggcgc cgcaggacaa attggatatg ctcttgttcc gatgattgct     120

aggggaatta tgcttggtgc ggaccagcct gttattctgc atatgctgga tattccacca     180

gctgctgaag ctcttaatgg tgttaagatg gagttggttg atgccgcatt tccacttctc     240

aagggagttg ttgcaacaac tgatgttgtt gaggcttgca ctggtgtgaa tgttgcggtt     300

atggttggtg gatcccccag gaaggaggga atggaaagga aggatgttat gtctaagaat     360

gtttcaatct acaaatctca agcatctgcc cttgaagccc atgcagcccc gaattgcaag     420

gttctggttg ttgccaatcc agcaaacacc aatgctctta tcttaaagga gtttgctcca     480

tctattcctg agaagaacat cagttgtttg acccgcctag accataacag ggcacttggt     540

cagatctctg agagacttga tgtccaagtt agtgatgtga agaatgttat catctggggc     600

aatcactctt ccagtcagta ccctgatgtg aaccacgcca ccgtgaggac ttccagtggc     660

gagaagcctg ttcgcgaact tgttaaagac gatgaatggc taaatgcagg gttcattgcc     720

actgtccagc agcgtggtgc tgcaatcatc aaagcgagga agctctccag tg             772
```

```
<210>   97
<211>   676
<212>   DNA
<213>   Lolium perenne
```

```
<220>
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<222>   (1)..(1)
<223>   n is a, c, g, or t
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<222>   (7)..(7)
<223>   n is a, c, g, or t
```

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<220>
<221>   misc_feature
<222>   (9)..(9)
<223>   n is a, c, g, or t
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<220>
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<222>   (14)..(14)
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<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (36)..(36)
<223>   n is a, c, g, or t

<400>   97
ncccgnant   ccanaccggc   tccaaggcgg   cgaagnaacc   gagcgcgtgc   tcgtcaccgg   60

cgccgcagga   caaattggat   atgctcttgt   tccgatgatt   gctaggggaa   ttatgcttgg   120

tgcggaccag   cctgttattc   tgcatatgct   ggatattcca   ccagctgctg   aagctcttaa   180

tggtgttaag   atggagttgg   ttgatgccgc   atttccactt   ctcaagggag   ttgttgcaac   240

aactgatgtt   gttgaggctt   gcactggtgt   gaatgttgcg   gttatggttg   gtggattccc   300

caggaaggag   ggaatggaaa   ggaaggatgt   tatgtctaag   aatgtttcaa   tctacaaatc   360

tcaagcatct   gcccttgaag   cccatgcagc   cccgaattgt   aaggttctgg   ttgttgccaa   420

tccagcaaac   accaatgctc   ttatcttaaa   ggagtttgct   ccatctattc   ctgagaagaa   480

catcagttgt   ttgacccgcc   tagaccataa   cagggcactc   ggtcagatct   ctgagagact   540

tgatgtccaa   gttagtgatg tgaagaatgt tatcatctgg   ggtaatcact   cttccagtca   600

ataccctgat   gtgaaccacg   ccaccgtgaa   gacttccagt ggcgagaagc   ctgttcgcga   660

acttgttaaa   gacgat   676

<210>   98
<211>   763
<212>   DNA
<213>   Lolium perenne

<220>
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ccacttctca   agggagttgt   tgcaacaact   gatgttgttg   aggcttgcac   tggtgtgaat   240

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tctaagaatg   tttcaatcta   caaatctcaa   gcatctgccc   ttgaagccca   tgcagccccg   360

aattgcaagg   ttctggttgt   tgccaatcca   gcaaacacca   atgctcttat   cttaaaggag   420

tttgctccat   ctattcctga   gaagaacatc   agttgtttga   cccgcctaga   ccataacagg   480

gcacttggtc   agatctctga   gagacttgat   gtccaagtta   gtgatgtgaa   gaatgttatc   540

atctggggca   atcactcttc   cagtcagtac   cctgatgtga   accacgccac   cgtgaagact   600

tccagtggcg   agaagcctgt   tcgcgaactt   gttaaagacg   atgaatggct   aaatgcaggg   660

ttcattgcca   ctgtccagca   gcgtggtgct   gcaatcatca   aagcgaggaa   gctctccagt   720

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gctctctctg ctgccagctc tgcttgtgac cacatccgtg att   763

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gttgcaacaa ctgatgttgt tgaggcttgc actggtgtga atgttgcggt tatggttggt       180

ggattcccca ggaaggaggg agtggaaagg aaggatgtta tgtctaagaa tgtttcaatc       240

tacaaatctc aagcatctgc ccttgaagcc catgcagccc cgaattgcaa ggttctggtt       300

gttgccaatc cagcaaacac caatgctctt atcttaaagg agtttgctcc atctattcct       360

gagaagaaca tcagttgttt gacccgccta gaccataaca gggcacttgg tcagatctct       420

gagagacttg atgtncaagt tagtgatgtg aanaatgnta tcatctggnc anctcactct       480

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gttctggttg ttgccaatcc agcaaacacc aatgctctta tcttaaagga gtttgctcca  180

tctattcctg agaagaacat cagttgtttg acccgcctag accataacag ggcacttggt  240

nagatctctg agagacttga tgtccaagtt agtgatgtga agaatgttat catctggggc  300

aatcactctt ccagtcagta ccctgatgtg aaccacgcca ccgtgaagac ttccagtggc  360

gagaagcctg ttcgcgaact tgttaaagac gatgaatggc taaatgcagg gttcattgcc  420

actgtccagc agcgtggtgc tgcaatcatc aaagcgagga agctttccag tgctcttttt  480

gctgccagct ctgcttgtga ccacatccgg gattgggttc tcggaacccc tganggaaca  540

tttgtttcca tgggtgtgta ttctgatggn tatacngggt gcctggtggg cttatctact  600

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<212> DNA
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atcagttgtt tgacccgcct agaccataac agggcactcg gtcagatctc tgagagactt   180

gatgtccaag ttagtgatgt gaagaatgtt atcatctggg gtaatcactc ttccagtcaa   240

taccctgatg tgaaccacgc caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa   300

cttgttaaag acgatgaatg gctaaatgca gggttcattg ccactgtcca gcagcgtggt   360

gctgcaatca tcaaagcgag gaagctctcc agtgctctct ctgctgccag ctctgcttgt   420

gaccacatcc gtgattgggt tcttggaacc cctgagggaa catttgtttc catgggtgtg   480

tattctgatg gttcatacgg tgtgcctgct gggcttatct actccttccc agtaacttgc   540

tgcggtggtg aatggacaat tgttcaaggg ctcccgatcg acgagttctc aagaaagaag   600

atggatgcca cagcccagga gctctcggag gagaaggctc tcgcctactc gtgcctcgag   660

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tncatgaaac tcat   .   734

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gaagaatgtt atcatctggg gcaatcactc ttccagtcag taccctgatg tgaaccacgc     240

caccgtgaag acttccagtg gcgagaagcc tgttcgcgaa cttgttaaag acgatgaatg     300

gctaaatgca gggttcattg ccactgtcca gcagcgtggt gctgcaatca tcaaagcgag     360

gaagctctcc agtgctctct ctgctgccag ctctgcttgt gaccacatcc gtgattgggt     420

tctcggaacc cctgagggaa catttgtttc catggntgtg tattctgatg gttcatacgg     480

tgtgcctgct gggcttatct actccttccc agtaacttgc tgcggtggtg aatggacaat     540

tgttcaaggg ctcccgatcg acgagttctc aagaaagaag atggatgcca gcccagga      600

gctctcgnag gagaaggctc tcgcctactc gtgcctcgag taactgcata ccagggagca     660

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ttaaaggagt ttgctccatc tattcctgag aagaacatca gttgtttgac ccgcctagac     120

cataacaggg cacttggtca gatctctgag agacttgatg tccaagttag tgatgtgaag     180

aatgttatca tctggggcaa tcactcttcc agtcagtacc tgatgtgaa ccacgccacc      240

gtgaagactt ccagtggcga agcctgtt cgcgaacttg ttaaagacga tgaatggcta     300

aatgcagggt tcattgccac tgtccagcag cgtggtgctg caatcatcaa agcgaggaag     360

ctctccagtg ctctctctgc tgccagctct gcttgtgacc acatccgtga ttgggttctc     420

ggaacccctg agggaacatt tgtttccatg ggtgtgtatt ctgatggttc atacggtgtg     480

cctgctgggc ttatctactc cttcccagta acttgctgcg gtggtgaatg gacaattgtt     540

caagggctcc cgatcgacga gttctcaaga aagaagatgg atgccacagc ccaggagctc     600

tcggaggaga aggctctcgc ctactcgtgc ctcgagtaac tgcataccag ggagcagctg     660

ccgctct                                                             667


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<211> 748
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<213> Lolium perenne

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cactgtccag cagcgtggtg ctgcaatcat caaagcgagg aagctctcca gtgctctctc   180

tgctgccagc tctgcttgtg accacatccg tgattgggtt ctcggaaccc ctgagggaac   240

atttgtttcc atgggtgtgt attctgatgg ttcatacggt gtgcctgctg ggcttatcta   300

ctccttccca gtaacttgct gcggtggtga atggacaatt gttcaagggc tcccgatcga   360

cgagttctca agaaagaaga tggatgccac agcccaggag ctctcggagg agaaggctct   420

cgcctactcg tgcctcgagt aactgcatac cagggagcag ctgccgctct gatgttttga   480

ataaaaggaa cattttggct ccatgaaact catctccact cagaacagtt gcacatcgcg   540

gtgcctttag ctggtttttc cagtgtgtat gaatgaggct tttgtagctc tattttcgcc   600

tgatgattta caggacagga tattggcagg aagattggaa caatttgacg tctgattaaa   660

accaacctct tattattccc gtgtgtatga atgaggcttt tgtagctcta ttttcgcctg   720

atgatttaca ggccatgata ttggcagg   748

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tgctgcaatc atcaaagcga ggaagctctc cagtgctctc tctgctgcca gctctgcttg   180

tgaccacatc cgtgattggg ttctcggaac ccctgaggga acatttgttt ccatgggtgt   240

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gatggatgcc acagcccagg agctctcgga ggagaaggct cttgcctact cgtgcctcga   420

gtaactgcat accagggagc agctgccgct ctgatgtttt gaataaaagg aacattttgg   480

ctccatgaaa ctcatctcca ctcagaacag ttgcacatcg cggtgccttt agctggtttt   540

tccagtgtgt atgaatgagg cttttgtagc tctattttcg cctgatgatt tacaggacag   600

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tctctctgct gccagctctg cttgtgacca catccgtgat tgggttctcg gaacccctga     180

gggaacattt gtttccatgg gtgtgtattc tgatggttca tacggtgtgc ctgctgggct     240

tatctactcc ttcccagtaa cttgctgcgg tggtgaatgg acaattgttc aagggctccc     300

gatcgacgag ttctcaagaa agaagatgga tgccacagcc caggagctct cggaggagaa     360

ggctctcgcc tactcgtgcc tcgagtaact gcataccagg gagcagctgc cgctctgatg     420

ttttgaataa aaggaacatt ttggctccat gaaactcatc tccactcaga acagttgcac     480

atcgcggtgc cttcagctgg tttttccagt gtgtatgaat gaggcttttg tagctctatt     540

ttcgcctgat gatttacagg acaggatatt ggcaggaaga ttggaacaat ttgacgtctg     600

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ctgctgccag ctctgcttgt gaccacatcc gtgattgggt tctcggaacc cctgagggaa     180

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actccttccc agtaacttgc tgcggtggtg aatggacaat tgttcaaggg ctcccgatcg     300

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aataaaagga acattttggc tccatgaaac tcatctccac tcagaacagt tgcacatcgc     480

ggtgccttta gctggttttt ccagtgtgta tgaatgaggc ttttgtagcg ctattttcgc     540

ctgatgattt acaggacagg atattggcag gaagattgga acaatttgac gtctgattaa     600
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gatgttttga ataaaaggaa cattttggct ccatgaaact catctccact cagaacagtt   180

gcacatcgcg gtgcctttag ctggtttttc cagtgtgtat gantgaggct tttgtagctc   240

tattttcgcc tgatgattta caggacagga tattggcagg aagattggaa caatttgacg   300

tctgattaaa accaacctct tattattcct gtgtgtatga atgaggcttt tgtagctcta   360

ttttcgcctg atgatttaca ggacatgata ttggcaggag gattggaaca annanann   418

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agaacagttg cacatcgcgg tgcctttagc tggttttttcc agtgtgtatg aatgaggctt   180

ttgtagctct attttcgcct gatgatttac aggacaggat attggcagga agattggaac   240

aatttgacgt ctgacaaaaa aaaaa   265

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tgaggctttt gtagctctat tttcgcctga tgatttacag gccacgatat tggcaggagg     180

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            20   25   30

Thr Tyr Asn Xaa Lys Arg Leu Leu Gly Val Asp Asn Xaa Xaa Met Xaa
        35   40   45

Xaa Thr Asp Xaa Ala Leu Xaa Xaa Arg Gly
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ggacatggcg tcagctgtta caatcagttc agtcagcgcg caggccgctt tggtttcaaa     120
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M80678527.ST25

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accaaggaac catggcagca cgagctacag tggcctaaag gcatcatcgt cgtcgatcag    180

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aagggttgtg ccaaaggcga agtctgggtc gcagatatcg cctcaggcat cttacaaggt    300

ggcggtgctt ggtgctgctg gtggcatcgg tcaaccactg ggcctgctga tcaagatgtc    360

tcctctggtc tcggagctgc gcctgtatga tatcgcgaat gtcaagggcg tcgctgcaga    420

tctcagccac tgcaacacgc ctgctcaggt catggacttc actggccccg cagagctagc    480

agagtgcttg aaaggtgtgg atgttgtcgt catccctgcg ggtgtcccaa ggaagccagg    540

catgacccgt gatgaccttt ttaacatnaa tgcgggaatc gncaagtcgc ttattgaggc    600

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ccct                                                                  664
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Pro Pro Lys Leu Asp Met Ala Ser Ala Val Thr Ile Ser Ser Val Ser
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Ala Gln Ala Ala Leu Val Ser Lys Pro Arg Asn His Gly Ser Thr Ser
            35                  40                  45


Tyr Ser Gly Leu Lys Ala Ser Ser Ser Ile Ser Phe Glu Ser Gly
    50                  55                  60


Thr Ser Phe Leu Gly Lys Thr Ala Ser Leu Arg Ala Thr Val Thr Thr
65                  70                  75                  80
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Arg Val Val Pro Lys Ala Lys Ser Gly Ser Gln Ile Ser Pro Gln Ala
              85   90   95

Ser Tyr Lys Val Ala Val Leu Gly Ala Gly Gly Ile Gly Gln Pro
          100   105   110

Leu Gly Leu Leu Ile Lys Met Ser Pro Leu Val Ser Glu Leu Arg Leu
          115   120   125

Tyr Asp Ile Ala Asn Val Lys Gly Val Ala Ala Asp Leu Ser His Cys
    130   135   140

Asn Thr Pro Ala Gln Val Met Asp Phe Thr Gly Pro Ala Glu Leu Ala
145   150   155   160

Glu Cys Leu Lys Gly Val Asp Val Val Val Ile Pro Ala Gly Val Pro
              165   170   175

Arg Lys Pro Gly Met Thr Arg Asp Asp Leu Phe Asn Xaa Asn Ala Gly
              180   185   190

Ile Xaa Lys Ser Leu Ile Glu Ala Val Ala Asp Asn Cys Pro Glu Gly
    195   200   205

Leu Ile His Ile Ile Asn Asn Pro Gly Gln Thr Pro Pro
    210   215   220

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M80678527.ST25

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aagttggaga tggcatcagc tgttaccatc agctcagtca gcgcgcaggc cgctttggtc   180

tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc atcatcgtcg   240

atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg ggcgactatc   300

acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga tatcacctca ggcctcgtac   360

aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct gctgatcaag   420

atgtctcctc tggtctcaga gctgcgcctg tatgatattg ccaatgtcaa gggagtcgct   480

gcagatctca gccactgcaa cacgccttct caggtcatgg acttcactgg cccagcagaa   540

ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt cccaaggaag   600

ccaggcatga cccgtgatga ccttttttaac atcaatgcgg gcatcgtcaa gtcgcttatt   660

gaggctgttg cagacaactg ccctgaggcc ttcatccata tcatcagcaa cccggtcaac   720

tccactgtgc cgattgctgc tgagattctg aaacagaagg gcgtctacaa ccccaagaag   780

ctcttcgggg tttccaccct ggatgttgtc agagctaaca catttgtagc tcagaagaag   840

aacctcagcc tcatcgatgt tgatgtccca gttgtcggtg ccatgctgg gatcacgatt   900

ctgcctctgt tgtccaagac taggccttct gtcagcttca cggacgagga aactgaacag   960
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M80678527.ST25

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ctgacaaaga ggatacagaa cgctgggaca gaggcggtgg aggcgaaggc tggtgctggc    1020

tctgctactc tgtccatggc ttatgccgct gccagatttg ttgagtcatc gctccgcgca    1080

atggctggtg atccagatgt ttacgagtgc acgtatgttc agtctgagtt aacagagctt    1140

ccattcttcg cgtccagagt taagcttggg aaggacggng ttgagtccat catttcctcc    1200

gacctggagg gagtgacgga gtacgaggcc aaggcgcttg angcattgaa ggctgagctg    1260

aag                                                                   1263
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Lys Thr Lys Xaa Asn Gln Xaa Ala Arg Gly Glu Pro Gly Arg Thr Gln
              20   25   30

Gln Phe Pro Ser Ala His Gln Pro Lys Leu Glu Met Ala Ser Ala Val
          35   40   45

Thr Ile Ser Ser Val Ser Ala Gln Ala Ala Leu Val Ser Lys Pro Arg
     50   55   60

Asn His Gly Ser Thr Ser Tyr Ser Gly Leu Lys Ala Ser Ser Ser Ser
65   70   75   80

Ile Ser Phe Glu Ser Gly Thr Ser Phe Leu Gly Lys Thr Ala Ser Leu
              85   90   95

Arg Ala Thr Ile Thr Ser Arg Ile Val Pro Lys Ala Lys Ser Gly Ser
             100   105   110

Gln Ile Ser Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly Ala Ala
         115   120   125

Gly Gly Ile Gly Gln Pro Leu Gly Leu Leu Ile Lys Met Ser Pro Leu
     130   135   140

Val Ser Glu Leu Arg Leu Tyr Asp Ile Ala Asn Val Lys Gly Val Ala
145   150   155   160

Ala Asp Leu Ser His Cys Asn Thr Pro Ser Gln Val Met Asp Phe Thr
              165   170   175

Gly Pro Ala Glu Leu Ala Asp Cys Leu Lys Gly Val Asp Val Val Val
              180   185   190

Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg Asp Asp Leu
         195   200   205

Phe Asn Ile Asn Ala Gly Ile Val Lys Ser Leu Ile Glu Ala Val Ala
     210   215   220

Asp Asn Cys Pro Glu Ala Phe Ile His Ile Ile Ser Asn Pro Val Asn
225   230   235   240

Ser Thr Val Pro Ile Ala Ala Glu Ile Leu Lys Gln Lys Gly Val Tyr
              245   250   255

Asn Pro Lys Lys Leu Phe Gly Val Ser Thr Leu Asp Val Val Arg Ala
         260   265   270

Asn Thr Phe Val Ala Gln Lys Lys Asn Leu Ser Leu Ile Asp Val Asp

                              Page 102

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    275   280   285

Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro Leu Leu
        290   295   300

Ser Lys Thr Arg Pro Ser Val Ser Phe Thr Asp Glu Glu Thr Glu Gln
305   310   315   320

Leu Thr Lys Arg Ile Gln Asn Ala Gly Thr Glu Ala Val Glu Ala Lys
                325   330   335

Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala Ala Arg
            340   345   350

Phe Val Glu Ser Ser Leu Arg Ala Met Ala Gly Asp Pro Asp Val Tyr
        355   360   365

Glu Cys Thr Tyr Val Gln Ser Glu Leu Thr Glu Leu Pro Phe Phe Ala
        370   375   380

Ser Arg Val Lys Leu Gly Lys Asp Xaa Val Glu Ser Ile Ile Ser Ser
385   390   395   400

Asp Leu Glu Gly Val Thr Glu Tyr Glu Ala Lys Ala Leu Xaa Ala Leu
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Lys Ala Glu Leu Lys
            420

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ccagnacgca aggggcgagc cggggcgcac gcagcaattc ccatctgctc accaacccaa   120

gttggagatg gcatcagctg ttaccatcag ctcagtcagc gcgcaggccg ctttggtctc   180

M80678527.ST25

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gaaaccaagg aatcatggca gcacaagcta cagtggccta aaggcatcat catcgtcgat    240

cagcttcgaa tcagggacat cattcctggg caagaccacc tctcttcggg cgactatcac    300

ctcaaggatt gtgccaaagg caaagtctgg gtctcagata tcacctcagg cctcgtacaa    360

ggtggcggtg cttggtgctg acggtggcat cggtcaacca ctgggcctgc tgatcaagat    420

gtctcctctg gtctcagagc tgcgcctgta tgatattgac aatgtcaagg gagtcgctgc    480

agatctcagn cactgcaaca cgccttctca ggtcatggac ttcactggcc cagcagaact    540

agctgactgc ttgaaaggtg ttgatgttgt cgncatccct gcgggtgtnc caaggaagcc    600

agncatgacc cgtgatgacc tttttaacat caatgcgggc atcgnnaagt cgcttattga    660

ggctgttgca gacaactccc ctgaggcctt catccatatc atcancnacc c            711
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agtcagcgcg caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag    180

tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa    240

gaccgcctct cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc    300

tcagatatca cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg    360

tcaaccactg ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga    420

tattgccaat gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt    480
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M80678527.ST25

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catggacttc actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt    540

catccctgcg ggtgtcccaa ggaagccagg catgacccgt gatgaccttt ttaacatcaa    600

tgcgggcatc gtcaagtcgc ttattgaggc tgttgcagac aactgcc                  647
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cggtcagcgc gcagtccgct ctggtttcga aaccaaggaa tcatggcagc acgagcttcg    180

gtggcctaaa ggcatcatcg gcgtcgatca gctttgaatc agggacatcg ttcctgggca    240

agactgcctc cctccgggcg actgttaccc caaggattgt gccaaaggca aagtctgggt    300

ctcagatatc gcctcaggca tcttacaagg tggcggtgct tggtgctgct ggtggcatcg    360

gccaaccact gggcctgctg atcaagatgt ctcctctagt ctcagagctg cgcctgtatg    420

atattgccaa tgtcaagggc gtcgctgcag atcttagcca ctgcaacacg ccttctcagg    480

tcatggactt cactggcccc gcggaactag ccgactgctt gaaaggtgtg gatgttgtcg    540

tcatccctgc gggtgtccca aggaagcctg gcatgactcg tgatgacctt tttaacatca    600

atgcgggcat cgtcaagtcg cttatcgagg ctgttgcaga caactgccct gaggccttca    660

tccatatcat cagcaacccg gtcaactcca cggtgccgat tgctgctgag attctgaaac    720

agaagggcgt ctacaacccc aagaagctct tcggggtttn caccctggat gttgtcagag    780

ctaacacatt tgtagctcan a                                              801
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M80678527.ST25

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caattcccat  ctgctcacca  acccaagttg  gagatggcat  cagctgttac  catcagctca     120

gtcagcgcgc  aggccgcttt  ggtctcgaaa  ccaaggaatc  atggcagcac  aagctacagt     180

ggcctaaagg  catcatcatc  gtcgatcagc  ttcgaatcag  ggacatcatt  cctgggcaag     240

accgcctctc  ttcgggcgac  tatcacctca  aggattgtgc  caaaggcaaa  gtctgggtct     300

cagatatcac  ctcaggcctc  gtacaaggtg  gcggtgcttg  gtgctgccgg  tggcatcggt     360

caaccactgg  gcctgctgat  caagatgtct  cctctggtct  cagagctgcg  cctgtatgat     420

attgccaatg  tcaagggagt  cgctgcagat  ctcagccact  gcaacacgcc  ttctcaggtc     480

atggacttca  ctggcccagc  agaactagct  gactgcttga  aaggtgttga  tgttgtcgtc     540

atccctgcgg  gtgtctcaag  gaagccaggc  atgacccgtg  atgacctttt  taacatcaat     600

gcgggcatcg  tcaagtcgct  tattgaggct  gntgcagaca  actgccctga  ggccttcatc     660

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M80678527.ST25

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agtcagcgcg caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag      180

tggcctaaag gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa      240

gaccgcctct cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc      300

tcagatatca cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg      360

tcaaccactg ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga      420

tattgccaat gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt      480

catggacttc actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt      540

catccctgcg ggtgtcccaa ggaagccagg cacgacccgt gatgaccttt ttaacatcaa      600

tgcgggcatc gtcaagtcgc ttattgaggc tgttgcagac aactgccctg aggccttcat      660

ccatatcatc agcaacccgg tcaactncac tgtga                                 695
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M80678527.ST25

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ggcctaaagg catcatcggc gtcgatcagc tttgaatcag ggacatcgtt cctgggcaag     240

actgcctccc tccgggcgac tgttacccca aggattgngc caaaggcaaa gtctgggtct     300

canatatcgc ctcaggcatc ttacaaggng gcggtgcttg gtgctgctgg tggcatcggt     360

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cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg     180

cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac     240

cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca     300

gatatcacct caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca     360

accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat     420

tgccaatgtc aagggagtcg ctgcagatct cagccactgg aacacgcctt ctcaggtcat     480

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ccctgcggnn gtcncaagga a                                               561
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<213> Lolium perenne

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tcagcgcgca ggccgctttg gtctcgaaac caaggaatca tggcagcaca agctacagtg   180

gcctaaaggc atcatcatcg tcgatcagct tcgaatcagg gacatcattc ctgggcaaga   240

ccgcctctct tcgggcgact atcacctcaa ggattgtgcc aaaggcaaag cctgggtctc   300

agatatcacc tcaggcctcg tacaaggtgg cggtgcttgg tgctgccggt ggcatcggtc   360

aaccactggg cctgctgatc aagatgtctc ctctggtctc agagctgcgc ctgtatgata   420

ttgccaatgt caagggagtc gctgcagatc tcagccactg caacacgcct tctcaggtca   480

tggacttcac tggcccagca gaactagctg actgcttgaa aggtgttgat gttgtcgtca   540

tccctgcggg tgtcccaagg aagccaggca tgacccgtga tgaccttttt aacatcaatg   600

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tcagcgcgca ggccgctttg gtctcgaaac caaggaatca tggcagcaca agctacagtg   180

gcctaaaggc atcatcatcg tcgatcagct tcgaatcagg gacatcattc ctgggcaaga   240

ccgcctctct tcgggcgact atcacctcaa ggattgtgcc aaaggcaaag tctgggtctc   300

agatatcacc tcaggcctcg tacaaggtgg cggtgcttgg tgctgccggt ggcatcggtc   360

aaccactggg cctgctgatc aagatgtctc ctctggtctc agagctgcgc ctgtatgata   420

ttgccaatgt caagggagtc gctgcagatc tcagccactg caacacgcct tctcaggtca   480

tggacttcac tggcccagca gaactagctg gctgcttgaa aggtgttgat gttgtcgtca   540

tccctgcggg tgtcccaagg aagccaggca tgaccgtga tgacctttt aacatcaatg   600

cgggcatcgt caagtcgctt attgaggctg ttgcagacaa ctgccctgag gccttcatcc   660

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cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg       180

cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac       240

cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca       300

gatatcacct caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca       360

accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat       420

tgccaatgtc aagggagtcg ctgcagatct cagccactgc aacacgcctt ctcaggtcat       480

ggacttcact ggcccagcag aactagctga ctgcttgaaa ggtgttgatg ttgtcgtcat       540

ccctgcgggt gtcccaagga agccaggcat gacccgtgat gaccttttta acatcaatgc       600

gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac tgccctgagg ccttcatcca       660

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agcgcgcagt ccgctctggt ttcgaaacca aggaatcatg gcagcacgag cttcggtggc   180

ctaaaggcat catcggcgtc gatcagcttt gaatcaggga catcgttcct gggcaagact   240

gnctccctcc gggcgactgt taccccaagg attgtgccaa aggcaaagtc tgggtctcag   300

atatcgcctc aggcatctta caaggtggcg gtgcttggtg ctgctggtgg catcggtcaa   360

ccactgggcc tgctgatcaa gatgtctcct ctggtctcag agctgcgcct gtatgatatt   420

gccaatgtca agggcgtcgc tgcagatctt agccactgca acacgccttc tcaggtcatg   480

gacttcactg gccccgcgga actagccgac tgcttgaaag gtgtggatgt tgtcgtcatc   540

cctgcgggtg tcccaaggaa gcctggcatg actcgtgatg acctttttaa catcaatgcg   600

ggcatcgtca agtcgcttat cgaggctgtt gcagacaact gccctgaggc cttcatccat   660

atcatcagca acccggtcaa ctccacggtg ccgattgctg ctgagattct gaaacagaag   720

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cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg      180

cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac      240

cgcctctctt cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca      300

gatatcacct caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca      360

accactgggc ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat      420

tgccaatgtc aagggagtcg ctgcagatct cagccactgc aacacgcctt ctcaggtcat      480

ggacttcact ggcccagcag aactagctga ctgcttgaaa ggtgttgatg ttgtcgtcat      540

ccctgcgggt gtcccaagga agccaggcat gacccgtgat gaccttttta acatcaatgc      600

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agcgcgcagg ccgctttggt ctcgaaacca aggaatcatg gcagcacaag ctacagtggc       180

ctaaaggcat catcatcgtc gatcagcttc gaatcangga catcattcct gggcaagacc       240

gcctctcttc gggcgactat cacctcaagg attgtgccaa aggcaaagtc tgggtctcag       300

atatcacctc aggcctcgta caaggtggcg gtgcttggtg ctgccggtgg catcggtcaa      . 360

ccactgggcc tgctgatcaa gatgtctcct ctggtctcag agctgcgcct gtatgatatt       420

gccaatgtca agggagtcgc tgcagatctc agccactgca acacgccttc tcaggtcatg       480

gacttcactg gcccagcaga actagctgac tgcttgaaag gtgttgatgt tgtcgtcatc       540

cctgcgggtg tctcaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg       600

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gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc    180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg  .. 240

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tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac    360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg    420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg    480

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ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg    600

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cgcgcaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct   180

aaaggcatca tcatcgtcga tcagcttcga atcagggaca tcattcctgg gcaagaccgc   240

ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat   300

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actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc   420

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tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca tcaatgcggg   600

catcgtcaag tcgcttattg aggctgttgc agacaactgc cctgaggcct tcatccatat   660

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ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat    300

atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc    360

actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc    420

caatgtcaag ggagtcgctg cagatctcag ccactgcaac acgccttctc aggtcatgga    480

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gcgcaggccg ctttggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta    180

aaggcatcat catcgtcgat cagcttcgaa tcagggacat cattcctggg caagaccgcc    240

tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata    300

tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca    360

ctgggcctgc tgatcaagat gtctcctctg gtctcagagc tgcgcctgta tgatattgcc    420

aatgtcaagg gagtcgctgc agatctcagc cactgcaaca cgccttctca ggtcatggac    480

ttcactggcc cagcagaact agctgactgc ttgaaaggtg ttgatgttgt cgtcatccct    540
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gcgggtgtcc caaggaagcc aggcatgacc cgtgatgacc tttttaacat caatgcgggc    600

atcgtcaagt cgcttattga ggctgttgca gaca                                634
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<210>   134
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<213>   Lolium perenne


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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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gcgcgcaggc cgccttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc    180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg    240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga    300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac    360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg    420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg    480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc    540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga ccttttttaac atcaatgcgg    600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata    660

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gcgtctacaa ccccaagaag ctcttcgggg tttccacc                            758


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<223>  n is a, c, g, or t

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gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc       180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg       240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga       300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac       360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg       420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg       480
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acttcactgg cccagctgaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc    540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg    600

gcatcgncaa gtcgcttatt gaggctgntg cagacaactg ccctgaggcc ttcatccata    660

tcatcagcaa cccggncaac tccactgngc cgattgctgc tganattctg aaacanaagg    720

gcgnntacaa ccccaanaag ctcttngggg nttncaccct g                        761
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<213> Lolium perenne

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gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc    180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg    240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga    300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac    360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg    420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg    480

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ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg    600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata    660

tcatcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg    720

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<223>  n is a, c, g, or t

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gcgcgcaggc cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc     180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg     240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga     300

tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac     360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg     420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg     480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc     540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg     600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata     660

tcatcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg     720

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<213>  Lolium perenne


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<223>  n is a, c, g, or t

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gcgcgcaggc cgccttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc     180

taaaggcatc atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg     240

cctctcttcg ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga     300
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tatcacctca ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac      360

cactgggcct gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg      420

ccaatgtcaa gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg      480

acttcactgg cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc      540

ctgcgggtgt cccaaggaag ccaggcatga cccgtgatga ccttttaac atcaatgcgg        600

gcatcgtcaa gtcgcttatt gaggctgttg cagacaactg ccctgaggcc ttcatccata      660

tcatcagcaa cccggtcaac tccactgtgc cgattgctgc tgagattctg aaacagaagg      720

gcgtctacaa ccccaagaag ctcttcgggg tttccaccct ggatgttgtc agagctaaca      780

catttgtagc tcanaagaag aacctca                                         807
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<222> (12)..(12)
<223> n is a, c, g, or t

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<222> (18)..(19)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa      180

aggcaccatc atcgtcgatc agcttcgaat cagggacatc attcctgggc aagaccgcct      240

ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat      300

cacctcaggc ctcgtacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac      360

tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcca      420

atgtcaaggg agtcgctgca gatctcagcc actgcaacac gccttctcag gtcatggact      480
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M80678527.ST25

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cgggtgtccc aaggaagcca ggcatgaccc atgatgacct ttttaacatc aatgcgggca    600

tcgtcaagtc gcttattgag gctgttgc                                       628
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cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa   180

aggcatcatc atcgtcgatc agcttcgaat cagggacatc attcctgggc aagaccgcct   240

ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat   300

cacctcaggc ctcgtacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac   360

tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcca   420

atgtcaaggg agtcgctgca gatctcagcc gctgcaacac gccttctcag gtcatggact   480

tcactggccc agcagaacta gctgactgct tgagaggtgt tgatgttgtc gtcatccctg    540

cgggtgtccc aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcgggca   600

tcgtcaagtc gcttattgag gctgttgcag acaactgccc                          640
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<210>   141
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M80678527.ST25

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<220>
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<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

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cgcaggccgc tttggtctcg aaaccaagga atcatggcag cacaagctac agtggcctaa     180

aggcatcatc atcgtcgatc agcttcgaat cagggacatc attcctgggc aagaccgcct     240

ctcttcgggc gactatcacc tcaaggattg tgccaaaggc aaagtctggg tctcagatat     300

cacctcaggc ctcgtacaag gtggcggtgt ttggtgctgc cggtggcatc ggtcaaccac     360

tgggcctgct gatcaagatg tctcctctgg tctcagagct gcgcctgtat gatattgcca     420

atgtcaaggg agtcgctgca gatctcagcc actgcaacac gccttctcag gtcatggact     480

tcactggccc agcagaacta gctgactgct tgaaaggtgt tgatgttgtc gtcatccctg     540

cgggtgtccc aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcgggca     600

tcgtcaagtc gcttattgag gctgttgcag acaactgccc tgaggccttc atccatatca     660

tcagcaaccc ggtcaactcc actgtgccga ttgctgct                            698


<210>  142
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<213>  Lolium perenne


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cgcgcaggcc gctttgatct cgaaaccaag gaatcctggc agcacaagct acagtggcct   180

aaaggcatca tcatcgtcga tcagcttcga atcagggaca tcattcctgg gcaagaccgc   240

ctctcttcgg gcgactatca cctcaaggat tgtgccaaag gcaaagtctg ggtctcagat   300

atcacctcag gcctcgtaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc   360

actgggcctg ctgatcaaga tgtctcctct ggtctcagag ctgcgcctgt atgatattgc   420

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catcgtcaag tcgcttattg aggctgntgc agacaactgc cctgaggcct tcatncatat   660

catcagcaac ccggtcaact ncactgtgcc gattgctgct gagattctga aan          713


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M80678527.ST25

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aaggcatcat catcgtcgat cagcttcgaa tcagggacat cattcctggg caagaccgcc    240

tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata    300

tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca    360

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atcgtcaagt cgcttattga ggctgttgca gacaactgcc ctgaggcctt catccatatc    660

atcagcaacc cggtcaactc cactgtgccg attgctgctg agattctgaa acagaagggc    720

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<213>   Lolium perenne


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cgcgcaggcc gctttggtct cgaaaccaag gaatcatggc agcacaagct acagtggcct    180

aaaggcatca tcatcgtcga tcagcttcga atcagggaca tcattcctgg gcaagaccgc    240

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cttcactggc ccagcagaac tagctgactg cttgaaaggt gttgatgttg tcgtcatccc    540

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catcgtcaag tcgcttattg aggctgttgc agacaactgc cctgaggcct tcatccatat    660

catcagcaac ccggtcaact ccactgtgcc gattgctgct gagattctga aacagaaggg    720

cgtctacaac cccaagaagc tcttcggggt ttccaccctg gatgttgtca gag    773
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<211>   684
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<213> Lolium perenne

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<223> n is a, c, g, or t

<400> 145
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ctgctcacca acccaagttg gggatggcat cagctgttac catcagctca gtcagcgcgc   120

aggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt ggcctaaagg   180

catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag accgcctctc   240

ttcgggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct cagatatcac   300

ctcaggcctc gtacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg   360

gcctgctgat caagatgtct cctctggtct cagaactgcg cctgtatgat attgccaatg   420

tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcaggtc atggacttcg   480

ctggcccagc agaactagct gactgcttga aggtgttga tgttgtcgtc atccctgcgg   540

gtgtnccaag gaagccaggc atgacccgtg atgacctttt taacatcaat gcgggcatcg   600

tcaagtcgct tattgaggct gttgcagaca actgccctga ggccttcatc catatcatca   660

gcaacccggt caacttcact gtgc   684

<210> 146
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<213> Lolium perenne

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<223> n is a, c, g, or t

<220>
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<222> (4)..(5)

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<220>
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<222>  (680)..(680)
<223>  n is a, c, g, or t

<400>  146
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ccatctgctc accaacccaa gttggagatg gcatcagctg ttaccatcag ctcagtcagc     120

gcgcaggccg ctttggtctc gaaaccaagg aatcatggca gcacaagcta cagtggccta     180

aaggcatcat catcgtcgat cagcttcgaa tcagggacat cattcctggg caagaccgcc     240

tctcttcggg cgactatcac ctcaaggatt gtgccaaagg caaagtctgg gtctcagata     300

tcacctcagg cctcgtacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca     360

ctgggcctgc tgatcaagat gtctcctctg gtctcagagc tgcgcctgta tgatattgcc     420

aatgtcaagg gagtcgctgc agatctcagc cactgcaaca cgccttctca ggtcatggac     480

ttcactggcc cagcagaact agctgactgc ttgaaaggtg ttgatgttgt cgtcatccct     540

gcgggtgtcc caaggaagcc aggcatgacc cgtgatgacc tttttaacat caatgcgggc     600

atcgtcaagt cgcttattga ggctgttgca gacaactgcc ctgaggcctt catccatatc     660

atcagcaacc cggtcaactn cactgtgccg attgt                                 695


<210>  147
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<220>
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<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<222> (678)..(678)
<223> n is a, c, g, or t

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atctgctcac caacccaagt tggagatggc atcagctgtt accatcagct cagtcagcgc   120

gcaggccgct ttggtctcga aaccaaggaa tcatggcagc acaagctaca gtggcctaaa   180

ggcatcatca tcgtcgatca gcttcgaatc agggacatca ttcctgggca agaccgcctc   240

tcttcgggcg actatcacct caaggattgt gccaaaggca aagtctgggt ctcagatatc   300

acctcaggcc tcgtacaagg tggcggtgct tggtgctgcc ggtggcatcg gtcaaccact   360

gggcctgctg atcaagatgt ctcctctggt ctcagagctg cgcctgtatg atattgccaa   420

tgtcaaggga gtcgctgcag atctcagcca ctgcaacacg ccttctcagg tcatggactt   480

cactggccca gcagaactag ctgactgctt gaaaggtgtt gatgttgtcg tcatccctgc   540

gggtgtccca aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat   600

cgtcaagtcg cttattgagg ctgntgcaga caactgccct gaggccttca tccatatcat   660

cagcaacccg gtcaactnca ctgtgccgat tgctg   695

<210> 148
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<213> Lolium perenne

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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (9)..(9)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (15)..(16)
<223> n is a, c, g, or t

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<222>  (18)..(18)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t

<400>  148
nnnaaaaana aaaannancc agnagcaagg ggcgagccgg ggcgcacgca gcaattccca      60

tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc agtcagcgcg     120

caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag tggcctaaag     180

gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct     240

cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca     300

cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg     360

ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga tattgccaat     420

gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc     480

actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt catccctgcg     540

ggtgtcccaa ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc      600

gtcaagtcgc ttattgaggc tgttgcagac aactgcc                             637
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<210>  149
<211>  675
<212>  DNA
<213>  Lolium perenne

<220>
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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

<220>
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<222>  (623)..(623)
<223>  n is a, c, g, or t

<400>  149
annaaaanca aaaannacca gnacgcaagg ggcgagccgg ggcgcacgca gcaattccca      60
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                                  M80678527.ST25
tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc aatcagcgcg      120

caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag tggcctaaag      180

gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct      240

cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca      300

cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg      360

ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga tattgccaat      420

gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc      480

actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt catccctgcg      540

ggtgtcccaa ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc      600

gtcaagtcgc ttattgaggc tgntgcagac aactgccctg aggccttcat ccatatcatc      660

agcaacccgg tcaac                                                       675
```

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<210>    150
<211>    764
<212>    DNA
<213>    Lolium perenne


<220>
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<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (720)..(720)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (741)..(741)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (745)..(745)
<223>    n is a, c, g, or t

<400>    150
nagaaaaaca aaaaagagcc agacgcaagg ggcgagccgg ggcgcacgca gcaattccca       60

tctgctcacc aacccaagtt ggagatggca tcagctgtta ccatcagctc agtcagcgcg      120

caggccgctt tggtctcgaa accaaggaat catggcagca caagctacag tggcctaaag      180

gcatcatcat cgtcgatcag cttcgaatca gggacatcat tcctgggcaa gaccgcctct      240

cttcgggcga ctatcacctc aaggattgtg ccaaaggcaa agtctgggtc tcagatatca      300

cctcaggcct cgtacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg      360

ggcctgctga tcaagatgtc tcctctggtc tcagagctgc gcctgtatga tattgccaat      420

gtcaagggag tcgctgcaga tctcagccac tgcaacacgc cttctcaggt catggacttc      480

actggcccag cagaactagc tgactgcttg aaaggtgttg atgttgtcgt catccctgcg      540
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ggtgtcccaa ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc      600

gtcaagtcgc ttattgaggc tgttgcagac aactgccctg aggccttcat ccatatcatc      660

agcaacccgg tcaactccac tgtgccgatt gctgctgaga ttctgaaaca gaacggcgtn      720

tccaccccaa gaagcttttc ngggnttaca ccctggatgt tgcc                       764
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<212>    DNA
<213>    Lolium perenne

<220>
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<223>    n is a, c, g, or t

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<222>    (745)..(745)
<223>    n is a, c, g, or t

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ctgctcacca acccaagttg gacatggcat cagctgttac catcagttcg gtcagcgcgc      120

agtccgctct ggtttcgaaa ccaaggaatc atggcagcac gagcttcggt ggcctaaagg      180

catcatcggc gtcgatcagc tttgaatcag ggacatcgtt cctgggcaag actgcctccc      240

tccgggcgac tgttacccca aggattgtgc caaaggcaaa gtctgggtct cagatatcgc      300

ctcaggcatc ttacaaggtg gcggtgcttg gtgctgctgg tggcatcggt caaccactgg      360

gcctgctgat caagatgtct cctctggtct canagctgcg cctgtatgat attgccaatg      420

tcaagggcgt cgctgcagat cttagccact gcaacacgcc ttctcaggtc atggacttca      480

ctggccccgc ggaactagcc gactgcttga aggtgtgga tgttgtcgtc atccctgcgg      540

gtgtcccaag gaagcctggc atgactcgtg atgacctttt taacatcaat gcgggcatcg      600

tcaagtcgct tatcgaggct gttgcagaca actgccctga ggccttcatc catatcatca      660

gcaacccggt caactccacg gtgccgattg ctgctgagat tctgaaacag aagggcgtct      720

acaaccccaa gaagctcttc ggggnttcca ccctggatgt tgtcagagct aacacatttg      780

tagct                                                                   785
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<211>    706
<212>    DNA
<213>    Lolium perenne

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<220>
<221>    misc_feature
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<221>   misc_feature
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<223>   n is a, c, g, or t

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<222>   (676)..(676)
<223>   n is a, c, g, or t

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ctgctcacca acccaagttg gagatggcat cagctgttac catcagctca gtcagcgcgc     120

aggccgcttt ggtctcgaaa ccaaggaatc atggcagcac aagctacagt ggcctaaagg     180

catcatcatc gtcgatcagc ttcgaatcag ggacatcatt cctgggcaag accgcctctc     240

ttcgggcgac tatcacctca aggattgtgc caaaggcaaa gtctgggtct cagatatcac     300

ctcaggcctc gtacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg     360

gcctgctgat caagatgtct cctctggtct cagagctgcg cctgtatgat attgccaatg     420

tcaagggagt cgctgcagat ctcagccact gcaacacgcc ttctcaggtc atggacttca     480

ctggcccagc agaactagct gactgcttga aaggtgttga tgttgtcgtc atccctgcgg     540

gtgtcccaag gaagccaggc atgacccgtg atgacctttt taacatcaat gcgggcatcg     600

tcaagtcgct tattgaggct gttgcagaca actgccctga ggccttcatc catatcatca     660

gcaacccggt caactncact gtgccgattg ctgctgagat tctgaa                    706
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<210>   153
<211>   682
<212>   DNA
<213>   Lolium perenne


<220>
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<222>   (6)..(8)
<223>   n is a, c, g, or t

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<222>   (21)..(21)
<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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ccaacccaag ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc       120

tctggtgtca aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc       180

atcgtcgatc agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc       240

gtcagtcacc ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc       300

atcttacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct       360

gatcaagatg tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg       420

cgtcgctgcc gatctcagcc accgcaacac gcctgctcag gtcatggact tcactggccc       480

cgcggaacta gcagagtgct tgaaaggcgt ggatgttgtc gtcatccctg cgggtgtncc       540

aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcggcat cgtcagnngc       600

ttatcgaggc tgttgcagac actgcctgag gccttatcca tattatcann acccgggact       660

gcacggtgcc gattgctgna at                                                682


<210>   154
<211>   712
<212>   DNA
<213>   Lolium perenne


<220>
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<220>
<221>  misc_feature
<222>  (686)..(686)
<223>  n is a, c, g, or t

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ccaccaaccc aagttggaca tggcatcagc tgtcaccatc agttcagtca gcgcccaggc     120

cgctctggtg tcaaaaccaa ggagtcatgg cagcacgagc ttcagtggcc tgaaggcatc     180

atcatcgtcg atcagcttcg aatctggaac atcattcctg ggcaagactg cctctcttcg     240

ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct gggtctcaga tatcgcctca     300

ggcatcttac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct     360

gctgatcaag atgtcgcctc tggcctcgga gctgcgcctg tatgatattg cgaatgtcaa     420

gggcgtcgct gccgatctca gccactgcaa cacgcctgct caggtcatgg acttcactgg     480

ccccgcggaa ctagcagagt gcttgaaagg cgtggatgtt gtcgnatccc tgcgggtgtt     540

ccaaggaagc caggcatgac ccgtgatgac ctttntaaca tcaatgcggg catcgncaag     600

ncgcttatcg aggctgttgc agacaactgc cctgaggnct tgatccatat tatgagaacc     660

ccggncaact ccacggcgcc gattgntgca gagattctga aacagaaggc gt            712
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<210>  155
<211>  644
<212>  DNA
<213>  Lolium perenne
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<223>  n is a, c, g, or t

<220>
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<222>  (19)..(19)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (619)..(619)
<223>  n is a, c, g, or t

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gctcaccaac ccaagttgga gatggcatca gctgttacca tcagctcagt cagcgcgcag      120

gccgctttgg tctcgaaacc aaggaatcat ggcagcacaa gctacagtgg cctaaaggca      180

tcatcatcgt cgatcagctt cgaatcaggg acatcattcc tgggcaagac cgcctctctt      240

cgggcgacta tcacctcaag gattgtgcca aaggcaaagt ctgggtctca gatatcacct      300

caggcctcgt acaaggtggc ggtgcttggt gctgccggtg gcatcggtca accactgggc      360

ctgctgatca agatgtctcc tctggtctca gagctgcgcc tgtatgatat tgccaatgtc      420

aagggagtcg ctgcagatct cagccactgc aacacgcctt ctcaggtcat ggacttcact      480

ggcccagcag aactagctga ctgcttgaaa gggttgatgt tgtcgtcatc cctgcgggtg      540

tcccaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg ggcatcgtca      600

agtcgcttat tgaggctgnt gcagacaact gccctgaggc cttt                .    644
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<210>  156
<211>  683
<212>  DNA
<213>  Lolium perenne
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<220>
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<220>
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<220>
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<222>  (671)..(671)
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<223> n is a, c, g, or t

<400> 156
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caccaaccca agttggacat ggcatcagct gtcaccatca gttcagtcag cgcccaggcc   120

gctctggtgt caaaaccaag gagtcatggc agcacgagct tcagtggcct gaaggcatca   180

tcatcgtcga tcagcttcga atctggaaca tcattcctgg gcaagactgc ctctcttcgg   240

gcgtcagtca ccccgaggat tgtgccaaag gcaaagtctg ggtctcagat atcgcctcag   300

gcatcttaca aggtggcggt gcttggtgct gccggtggca tcggtcaacc actgggcctg   360

ctgatcaaga tgtcgcctct ggtctcggag ctgcgcctgt atgatattgc gaatgtcaag   420

ggcgtcgctg ccgatctcag ccactgcaac acgcctgctc aggtcatgga cttcactggc   480

cccgcggaac tagcagagtg cttgaaaggc gtggatgttg tcgtcatccc tgcgggtgtc   540

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cgctctggtg tcaaaaccaa ggagtcatgg cagcacgagc ttcagtggcc tgaaggcatc   180

atcatcgtcg atcagcttcg aatctggaac atcattcctg ggcaagactg cctctcttcg   240

ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct gggtctcaga tatcgcctca   300

ggcatcttac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct   360

gctgatcaag atgtcgcctc tggtctcgga gctgcgcctg tatgatattg cgaatgtcaa   420

gggcgtcgct gccgatctca gccactgcaa cacgcctgct ctggtcatgg acttcactgg   480

ccccgcggaa ctagcagagt gcttgaaagg cgtggatgtt gtcgtcatcc ctgcgggtgt   540

cccaaggaan ccaggcatga cccgtgatga cctttttaac atcaatgcgg gcatcgtcaa   600

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ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcatcatca   180

tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggcg   240

tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca   300

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atcaagatgt ctcctctggt ctcagagctg cgcctgtatg atattgccaa tgtcaagggc    420

gtcgctgcag atcttagcca ctgcaacacg ccttctcagg tcatggactt cactggcccc    480

gcggaactag ccgactgctt gaaaggtgtg gatgttgtcg tcatccctgc gggtgtccca    540

aggaagcctg gcatgactcg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg    600

cttatcgagg ctgttgcaga caactgccct gaggccttca tccatatcat cagcaacccg    660

gtcaactcca cggtgccgat tgctgctgag attctgaaac agaagggcgt ctacaacccc    720

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cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc    180

atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg    240

ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga tatcacctca    300

ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct    360

gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg ccaatgtcaa    420

gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg acttcactgg    480

cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt    540

cccaaggaag ccagacaact gccctgaggc cttcatccat atcatcagca acccggtcaa    600

ctccactgtg ccgattgctg ctgagatcta aacagaa                             637
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<213>   Lolium perenne

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ctcaccaacc caagttggag atggcatcag ctgttaccat cagctcagtc agcgcgcagg   120 .

ccgctttggt ctcgaaacca aggaatcatg gcagcacaag ctacagtggc ctaaaggcat   180

catcatcgtc gatcagcttc gaatcaggga catcattcct gggcaagacc gcctctcttc   240

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aggcctcgta caaggtggcg gtgcttggtg ctgccggtgg catcggtcaa ccactgggcc   360

tgctgatcaa gatgtctcct ctggtctcag agctgcgcct gtatgatatt gccaatgtca   420

agggagtcgc tgcagatctc agccactgca acacgccttc tcaggtcatg gacttcactg   480

gcccagcaga actagctgac tgcttgaaag gtgttgatgt tgtcgtcatc cctgcgggtg   540

tcccaaggaa gccaggcatg acccgtgatg acctttttaa catcaatgcg ggcatcgtca   600

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cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc   180

atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg   240

ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga tatcacctca   300

ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct   360

gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg ccaatgtcaa   420

gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg gcttcactgg   480

cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt   540

cccaaggaag ccaggcatga cccgtgatga cctttttaac atcaatgcgg gcatcgtcaa   600

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accaacccaa gttggacatg gcatcagctg tcaccatcag ttcagtcagc gcccaggccg   120

ctctggtgtc aaaaccaagg agtcatggca gcacgagctt cagtggcctg aaggcatcat   180

catcgtcgat cagcttcgaa tctggaacat cattcctggg caagactgcc tctcttcggg   240

cgtcagtcac cccgaggatt gtgccaaagg caaagtctgg gtctcagata tcgcctcagg   300

catcttacaa ggtggcggtg cttggtgctg ccggtggcat cggtcaacca ctgggcctgc   360

tgatcaagat gtcgcctctg gtctcggagc tgcgcctgta tgatattgcg aatgtcaagg   420

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caaggaagcc aggcatgacc cgtgatgacc tttttaacat caatgcgggc atcgtcaagt     600

cgcttatcga ggctgttgca gacaactgcc ctgaggcctt catccat                   647
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cgctttggtc tcgaaaccaa ggaatcatgg cagcacaagc tacagtggcc taaaggcatc   180

atcatcgtcg atcagcttcg aatcagggac atcattcctg ggcaagaccg cctctcttcg   240

ggcgactatc acctcaagga ttgtgccaaa ggcaaagtct gggtctcaga tatcacctca   300

ggcctcgtac aaggtggcgg tgcttggtgc tgccggtggc atcggtcaac cactgggcct   360

gctgatcaag atgtctcctc tggtctcaga gctgcgcctg tatgatattg ccaatgtcaa   420

gggagtcgct gcagatctca gccactgcaa cacgccttct caggtcatgg acttcactgg   480

cccagcagaa ctagctgact gcttgaaagg tgttgatgtt gtcgtcatcc ctgcgggtgt   540

cccaaggaag ccaggcatga cccgtgatga ccttttttaac atcaatgcgg gcatcgtcaa   600

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c                                                                    661
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ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcatcatca     180

tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggcg     240

tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca     300

tcttacaagg tggcggtgct tggtgctgcc ggtggcatcg gtcaaccact gggcctgctg     360

atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc     420

gtcgctgccg acctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc     480

gcggaactag cagagtgctt gaaaggcgtg gatgttgtcg tcatccctgc gggtgtccca     540

aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg     600

cttatcgagg ctgttgcaga caactgccct gaggccttca                          640
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tggtgtcaaa accaaggagt catggcagca cgagcttcag tggcctgaag gcatcatcat    180

cgtcgatcag cttcgaatct ggaacatcat tcctgggcaa gactgcctct cttcgggcgt    240

cagtcacccc gaggattgtg ccaaaggcaa agtctgggtc tcagatatcg cctcaggcat    300

cttacaaggt ggcggtgctt ggtgctgccg gtggcatcgg ttaaccactg ggcctgctga    360

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cggaactagc agagtgcttg aaaggcgtgg atgttgtcgt catccctgcg ggtgtcccaa    540

ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc gtcaagtcgc    600

ttatcgaggc tgttgcagac aactgccctg aggccttcat ccatattatc agcaacccgg    660

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ccaacccaag ttggacatgg catctgctgt caccatcagt tcagtcagcg cccaggccgc    120

tctggtgtca aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc    180

atcgtcgatc agcttcgaat ctggagcatc attcctgggc aagactgcct ctcttcgggc    240

gtcagtcacc ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc    300

atctcacaag gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct    360

gatcaagatg tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg    420

cgtcgctgcc gatctcagcc actgcaacac gcctgctcag gtcatggact tcactggccc    480

cgcggaacta gcagagtgct tgaaaggcgt ggatgttgtc gtcatccctg cgggtgtccc    540

aaggaagcca ggcatgaccc gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc    600

gcttatcgag gctgttgcag acaactgccc tgaggccttc atccatatta tcagcaaccc    660

ggtcaactcc acggtgccga ttgctgcaga gattctgaaa cagaagggcg tctacaaccc    720

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caacccaagt tggacatggc atcagctgtc accatcagtt cagtcagcgc ccaggccgct     120

ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcatcatca     180

tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggcg     240

tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca     300

tcttacaagg tggcggtgct tggtgctgcc ggtggcatcg gtcaaccact gggcctgctg     360

atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc     420

gtcgctgccg atctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc     480

gcggaactag cagagtgctt gaaaggcgtg gatgttgtcg tcatccctgc gggtgtccca     540

aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg     600

cttatcgagg ctgntgcaga caactgccct gaggccttca tccatattat cagcaacccg     660

gtcna                                                                 665
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tggtgtcaaa accaaggagt catggcagca cgagcttcag tggcctgaag gcatcatcat      180

cgtcgatcag cttcgaatct ggaacatcat tcctgggcaa gactgcctct cttcgggcgt      240

cagccacccc gaggattgtg ccaaaggcaa agtctgggtc tcagatatcg cctcaggcat      300

cttacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg ggcctgctga      360

tcaagatgtc gcctctggtc tcggagctgc gcctgtatga tattgcgaat gtcaagggcg      420

tcgctgccga tctcagccac tgcaacacgc ctgctcaggt catggacttc actggccccg      480

cggaactagc agagtgcttg aaaggcgtgg atgttgtcgt catccctgcg ggtgtcccaa      540

ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc gtcaagtcgc      600

ttatcgaggc tgttgcagac aactgccctg aggccttcat ccatattatc agcaacccgg      660

tcaactncac ggtgccgatn                                                   680
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caacccaagt tggacatggc atcagccgtc accatcagtt cagtcagcgc ccaggccgct      120

ctggtgtcaa aaccaaggag tcatggcagc acgagcttca gtggcctgaa ggcatcatca      180

tcgtcgatca gcttcgaatc tggaacatca ttcctgggca agactgcctc tcttcgggcg      240

tcagtcaccc cgaggattgt gccaaaggca aagtctgggt ctcagatatc gcctcaggca      300

tcttacaagg tggcggtgct tggtgctgcc ggtggcatcg gtcaaccact gggcctgctg      360
```

M80678527.ST25

```
atcaagatgt cgcctctggt ctcggagctg cgcctgtatg atattgcgaa tgtcaagggc    420

gtcgctgccg atctcagcca ctgcaacacg cctgctcagg tcatggactt cactggcccc    480

gcggaactag cagagtgctt gaaaggcgtg gatgttgtcg tcatccctgc gggtgtccca    540

aggaagccag gcatgacccg tgatgacctt tttaacatca atgcgggcat cgtcaagtcg    600

cttatcgagg ctgttgcaga caactgccct gaggccttca tccatattat cagcaacccg    660

gtcaactcca cggtgccgat tgctgcagag attctgaaac agaagggcgt ctacaacccc    720

aagaagctct tcggggtttc caccctggat gttgtcaggg ctaacacatt              770
```

```
<210>   170
<211>   702
<212>   DNA
<213>   Lolium perenne


<220>
<221>   misc_feature
<222>   (2)..(2)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (4)..(5)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (11)..(11)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (18)..(18)
<223>   n is a, c, g, or t

<400>   170
anannaaaaa naaaaaangg gcgagccggg gcgcacgcag caattcccat ctgcccacca    60

acccaagttg gacatggcat cagctgtcac catcagttca gtcagcgccc aggccgctct    120

ggtgtcaaaa ccaaggagtc atggcagcac gagcttcagt ggcctgaagg catcatcatc    180

gtcgatcagc ttcgaatctg gaacatcatt cctgggcaag actgcctctc ttcgggcgtc    240

agtcaccccg aggattgtgc caaaggcaaa gtctgggtct cagatatcgc ctcaggcatc    300

ttacaaggtg gcggtgcttg gtgctgccgg tggcatcggt caaccactgg gcctgctgat    360

caagatgtcg cctctggtct cggagctgcg cctgtatgat attgcgaatg tcaagggcgt    420

cgctgccgat ctcagccact gcaacacgcc tgctcaggtc atggacttca ctggccccgc    480

ggaactagca gagtgcttga aaggcgtgga tgttgtcgtc atccctgcgg gtgtcccaag    540

gaagccaggc atgacccgtg atgacctttt aacatcaat gcgggcatcg tcaagtcgct    600

tatcgaggct gttgcagaca actgccctga ggccttcatc catattatca gcaacccggt    660

caactccacg gtgccgattg ctgcagagat tctgaaacag ag                       702
```

```
<210>   171
```

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```
<211>    777
<212>    DNA
<213>    Lolium perenne

<400>    171
cagaaaaaga aaaaaagggg cgagccgggg cgcacgcagc aattcccatc tgcccaccaa        60

cccaagttgg acatggcatc agctgtcacc atcagttcag tcagcgccca ggccgctctg       120

gtgtcaaaac caaggagtca tggcagcacg agcttcagtg gcctgaaggc atcatcatcg       180

tcgatcagct tcgaatctgg aacatcattc ctgggcaaga ctgcctctct tcgggcgtca       240

gtcaccccga ggattgtgcc aaaggcaaag tctgggtctc agatatcgcc tcaggcatct       300

tacaaggtgg cggtgcttgg tgctgccggt ggcatcggtc aaccactggg cctgctgatc       360

aagatgtcgc ctctggtctc ggagctgcgc ctgtatgata ttgcgaatgt caagggcgtc       420

gctgccgatc tcagccactg caacacgcct gctcaggtca tggacttcac tggccccgcg       480

gaactagcag agtgcttgaa aggcgtggat gttgtcgtca tccctgcggg tgtcccaagg       540

aagccaggca tgacccgtga tgaccttttt aacatcaatg cgggcatcgt caagtcgctt       600

atcgaggctg ttgcagacaa ctgccctgag gccttcatcc atattatcag caacccggtc       660

aactccacgg tgccgattgc tgcagagatt ctgaaacaga agggcgtcta caaccccaag       720

aagctcttcg gggtttcccc cctggatgtt gtcagggcta acacatttgt agctcaa        777


<210>    172
<211>    707
<212>    DNA
<213>    Lolium perenne


<220>
<221>    misc_feature
<222>    (8)..(8)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (11)..(11)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (659)..(659)
<223>    n is a, c, g, or t

<400>    172
aaaaaaanaa ngggcgagcc ggggcgcacg cagcaattcc catctgccca ccaacccaag        60

ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc tctggtgtca       120

aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc atcgtcgatc       180

agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc gtcagtcacc       240

ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc atcttacaag       300

gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct gatcaagatg       360

tcgcctctgg tctcggagct gcgcctgtat gatattgcga atgtcaaggg cgtcgctgcc       420
```

M80678527.ST25

```
gatctcagcc actgcaacac gcctgctcag gtcatggact tcactggccc cgcggaacta      480

gcagagtgct tgaaaggcgt ggatgttgtc gtcatccctg cgggtgtccc aaggaagcca      540

ggcatgaccc gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc gcttatcgag      600

gctgttgcag acaactgccc tgaggccttc atccatatta tcagcaaccc ggtcaactnc      660

acggtgccga ttgctgcaga gattctgaaa caaaaggcgt ctacaac              .      707
```

```
<210>  173
<211>  687
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (3)..(4)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (11)..(11)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (571)..(571)
<223>  n is a, c,. g, or t

<220>
<221>. misc_feature
<222>  (605)..(605)
<223>  n is a, c, g,. or t

<220>
<221>  misc_feature
<222>  (655)..(655)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (665)..(665)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (674)..(674)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (680)..(680)
<223>  n is a, c, g, or t

<400>  173
aannaaaaaa ngggcgagcc ggggcgcacg cagcaattcc catctgccca ccaacccaag      60

ttggacatgg catcagctgt caccatcagt tcagtcagcg cccaggccgc tctggtgtca     120

aaaccaagga gtcatggcag cacgagcttc agtggcctga aggcatcatc atcgtcgatc     180

agcttcgaat ctggaacatc attcctgggc aagactgcct ctcttcgggc gtcagtcacc     240

ccgaggattg tgccaaaggc aaagtctggg tctcagatat cgcctcaggc atcttacaag     300
```

M80678527.ST25

```
gtggcggtgc ttggtgctgc cggtggcatc ggtcaaccac tgggcctgct gatcaagatg    360

tcgcctctgg tctcggagct gcgcccgtat gataatgcga atgtcaaggg cgtcgctgcc    420

gatctcagcc actgcaacac gcctgctcag gtcatggact tcactggccc cgcggaacta    480

gcagagtgct tgaaaggcgt ggatgctgtc gtcatccctg cgggtgtccc aaggaagcca    540

ggcatgaccc gtgatgacct ttttaacatc natgcgggca tcgtcaagtc gcttatcgag    600

gctgntgcag acaactgccc tgaggccttc atccatatta tcagcaaccc ggtcnactcc    660

acggngccga ttgntgcaan attttgc                                        687
```


<210> 174
<211> 473
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (211)..(211)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (258)..(258)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (354)..(355)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (369)..(369)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (397)..(397)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (421)..(422)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (441)..(441)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (445)..(445)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (461)..(461)
<223> n is a, c, g, or t

<220>
<221> misc_feature

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<222> (465)..(465)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (468)..(468)
<223> n is a, c, g, or t

<400> 174
caaggggcga gccggggcgc acgcagcaat tcccatctgc tcaccaaccc aagttggaga   60

tggcatcagc tgttaccatc agctcagtca gcgcgcaggc cgctttggtc tcgaaaccaa   120

ggaatcatgg cagcacaagc tacagtggcc taaaggcatc atcatcgtcg atcagcttcg   180

aatcagggcc atcattcctg gacaagaccg nctctcttcg ggcgactatc acctcaagga   240

ttgtgccaaa ggcaaagnct gggtctcaga tatcacctca ggcctcgtac aaggtggcgg   300

tgcttggtgc tgccggtggc atcggtcaac cactgggcct gctgatcaag atgnntcctc   360

tggtctcana gctgcgcctg tatgatattg ccaatgncaa gggagtcgct gcaaatctca   420

nncactgcaa cacgccttct naggncatgg acttcactgg nccancanaa cta   473

<210> 175
<211> 642
<212> DNA
<213> Lolium perenne

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (9)..(10)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (38)..(38)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (478)..(478)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (641)..(641)
<223> n is a, c, g, or t

<400> 175
anaggggcnn gccggggcgc cgcgaattcc atctgccncc accaagttgg acatggcatc   60

agctgtacca tcagttagta gcgcccaggc cgctctggtg taaaaccaag gagtcatggc   120

agcacgagct tcagtggcct gaaggcatca tcatcgtcga tcagcttcga atctggaaca   180

tcattcctgg caagactgc ctctcttcgg gcgtcagtca ccccgaggat tgtgccaaag   240

gcaaagtctg ggtctcagat atcgcctcag gcatcttaca aggtggcggt gcttggtgct   300

M80678527.ST25

```
gctggtggca tcggtcaacc actgggcctg ctgatcaaga tgtctcctct ggtctcagag    360

ctgcgcctgt atgatattgc caatgtcaag ggcgtcgctg cagatcttag ccactgcaac    420

acgccttctc aggtcatgga cttcactggc cccgcggaac tagccgactg cttgaaangt    480

gtggatgttg tcgtcatccc tgcgggtgtc ccaaggaagc ctggcatgac tcgtgatgac    540

cttttttaaca tcaatgcggg catcgccaag tcgcttatca aggctgttgc agacaactcc    600

cttgaggcct tcatccatat catcagcaac ccggtcaact nc                       642
```

```
<210>  176
<211>  767
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (12)..(12)
<223>  n is a, c, g, or t

<400>  176
ggagccgggg cnccgcagca attcccatct gctcaccaac ccaagttgga gatggcatca    60

gctgttacca tcagctcagt cagcgcgcag gccgctttgg tctcgaaacc aaggaatcat    120

ggcagcacaa gctacagtgg cctaaaggca tcatcatcgt cgatcagctt cgaatcaggg    180

acatcattcc tgggcaagac cgcctctctt cgggcgacta tcacctcaag gattgtgcca    240

aaggcaaagt ctgggtctca gatatcacct caggcctcgt acaaggtggc ggtgcttggt    300

gctgccggtg gcatcggtca accactgggc ctgctgatca agatgtctcc tctggtctca    360

gagctgcgcc tgtatgatat tgccaatgtc aagggagtcg ctgcagatct cagccactgc    420

aacacgcctt ctcaggtcat ggacttcact ggcccagcag aactagctga ctgcttgaaa    480

ggtgttgatg ttgtcgtcat ccctgcgggt gtcccaagga agccaggcat gacccgtgat    540

gacctttta acatcaatgc gggcatcgtc aagtcgctta ttgaggctgt tgcagacaac    600

tgccctgagg ccttcatcca tatcatcagc aacccggtca actccactgt gccgattgct    660

gctgagattc tgaaacagaa gggcgtctac aaccccaaga agctcttcgg ggtttccacc    720

ctggatgttg tcagagctaa cacatttgta gctcagaaga agaacct               767
```

```
<210>  177
<211>  701
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (637)..(637)
<223>  n is a, c, g, or t

<400>  177
gggggcgcac gcacaattcc catctgctca ccaacccatt ggagatggca tcagctgtta    60

ccatcagctc agtcagcgcg caggccgctt tggtctcgaa accaaggaat catggcagca    120
```

M80678527.ST25

```
caagctacag  tggcctaaag  gcatcatcat  cgtcgatcag  cttcgaatca  gggacatcat   180

tcctgggcaa  gaccgcctct  cttcgggcga  ctatcacctc  aaggattgtg  ccaaaggcaa   240

agtctgggtc  tcagatatca  ccccaggcct  cgtacaaggt  ggcggtgctt  ggtgctgccg   300

gtggcatcgg  tcaaccactg  ggcctgctga  tcaagatgtc  tcctctggtc  tcagagctgc   360

gcctgtatga  tattgccaat  gtcaagggag  tcgctgcaga  tctcagccac  tgcaacacgc   420

cttctcaggt  catggacttc  actggcccag  cagaactagc  tgactgcttg  aaaggtgttg   480

atgttgtcgt  catccctgcg  ggtgtcccaa  ggaagccagg  catgacccgt  gatgaccttt   540

ttaacatcaa  tgcgggcatc  gtcaagtcgc  ttattgaggc  tgttgcagac  aactgccctg   600

aggccttcat  ccatatcatc  agcaacccgg  tcaactncac  tgtgccgatt  gctgctgaga   660

ttctgaaaca  gaagggcgtc  tacagcccca  agaagctctt  a                       701
```

```
<210>   178
<211>   333
<212>   DNA
<213>   Lolium perenne


<220>
<221>   misc_feature
<222>   (1)..(1)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (17)..(17)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (33)..(33)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (281)..(281)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (293)..(293)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (297)..(297)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (303)..(303)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (327)..(327)
<223>   n is a, c, g, or t

<400>   178
```

M80678527.ST25

```
ncagcagcaa ttccctnctg cccaccaacc canttggaca tggcatcagc tgtcaccatc       60

agttcagtca gcgcccaggc cgctctggtg tcaaaaccaa ggagtcatgg cagcacgagc      120

ttcagtggcc tgaaggcatc atcatcgtcg atcagcttcg aatctggaac atcattcctg      180

ggcaagactg cctctcttcg ggcgtcagtc accccgagga ttgtgccaaa ggcaaagtct      240

gggtctcaga tatcgcctca ggcatcttac aaggtggcgg ngcttggtgc tgncggnggc      300

atnggccaac cactgggcct gctgatnaag atg                                   333
```

```
<210>   179
<211>   630
<212>   DNA
<213>   Lolium perenne


<220>
<221>   misc_feature
<222>   (2)..(2)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (6)..(6)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (16)..(17)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (33)..(33)
<223>   n is a, c, g, or t

<400>   179
```

```
gncacnacat tccccnnctg cccaccaacc canttggaat ggcatcagct gtcaccatca       60

gttcagtcag cgcccaggcc gctctggtgt caaaaccaag gagtcatggc agcacgagct      120

tcagtggcct gaaggcatca tcatcgtcga tcagcttcga atctggaaca tcattcctgg      180

gcaagactgc ctctcttcgg gcgtcagtca ccccgaggat tgtgccaaag gcaaagtctg      240

ggtctcagat atcgcctcag gcatcttaca aggtggcggt gcttggtgct gccggtggca      300

tcggtcaacc actgggcctg ctgatcaaga tgtcgcctct ggtctcggag ctgcgcctgt      360

atgatattgc gaatgtcaag ggcgtcgctg ccgatctcag ccactgcaac acgcctgctc      420

aggtcatgga cttcactggc cccgcggaac tagcagagtg cttgaaaggc gtggatgttg      480

tcgtcatccc tgcgggtgtc ccaaggaagc caggcatgac ccgtgatgac ctttttaaca      540

tcaatgcggg catcgtcaag tcgcttatcg aggctgttgc agacaactgc cctgaggcct      600

tcatccatat tatcagcaac ccggtcaact                                       630
```

```
<210>   180
<211>   671
<212>   DNA
<213>   Lolium perenne
```

M80678527.ST25

```
<220>
<221>  misc_feature
<222>  (467)..(467)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (617)..(617)
<223>  n is a, c, g, or t

<400>  180
tctgcccacc aacccaagtt ggacatggca tcagctgtca ccatcagttc agtcagcgcc     60

caggccgctc tggtgtcaaa accaaggagt catggcagca cgagcttcag tggcctgaag    120

gcatcatcat cgtcgatcag cttcgaatct ggaacatcat tcctgggcaa gactgcctct    180

cttcgggcgt cagtcacccc gaggattgtg ccaaaggcaa agtctgggtc tcagatatcg    240

cctcaggcat cttacaaggt ggcggtgctt ggtgctgccg gtggcatcgg tcaaccactg    300

ggcctgctga tcaagatgtc gcctctggtc tcggagctgc gcctgtatga tattgcgaat    360

gtcaagggcg tcgctgccga tctcagccac tgcaacacgc ctgctcaggt catggacttc    420

actggccccg cggaactagc agagtgcttg aaaggcgtgg atgttgncgt catccctgcg    480

ggtgtcccaa ggaagccagg catgacccgt gatgaccttt ttaacatcaa tgcgggcatc    540

gtcaagtcgc ttatcgaggc tgttgcagac aactgccctg aggccttcat ccatattatc    600

agcaacccgg tcaactncac ggtgccgatt gctgcagaga ttctgaaaca gaagggcgtc    660

tacaacccca a                                                          671
```

```
<210>  181
<211>  634
<212>  DNA
<213>  Lolium perenne

<400>  181
ttggtgctgc tggtggcatc ggtcaaccac tgggcctgct gatcaagatg tctcctctcg     60

tctcggagct gcgcctgtat gatatcgcca atgtcaaggg agtcgctgca gatctcagcc    120

actgcaacac gcctgctcag gccatggact tcactggccc cgcggaacta gcagagtgct    180

tgaaaggtgt ggatgttgtc gtcatccctg cgggtgtccc aaggaagcct ggcatgactc    240

gtgatgacct ttttaacatc aatgcgggca tcgtcaagtc gcttattgag gctgttgcag    300

acaactgccc agaggccttc atccatatca tcagcaaccc ggtcaactcc actgtgccga    360

ttgctgctga gattctgaaa cagaagggtg tctacaaccc caagaagctc ttcggggttt    420

ccaccctgga tgttgtcaga gctaacacat ttgtagctca gaagaagaac ctcagcctca    480

tcgatgttga tgtcccagtt gtcggtggcc atgctgggat cacgattctg cctctgttgt    540

ccaagactag gccttctgtc agcttcacgg acgaggaaac tgaacagctg acaaagagga    600

tacagaacgc tgggacagag gtggtggagg cgaa                                 634
```

```
<210>  182
<211>  777
```

M80678527.ST25

```
<212>  DNA
<213>  Lolium perenne


<220>
<221>  misc_feature
<222>  (693)..(693)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (756)..(756)
<223>  n is a, c, g, or t

<400>  182
gatcagccct gcaacacgcc tgctcaggcc atggacttca ctggccccgc ggaactagca      60

gagtgcttga aaggtgtgga tgttgtcgtc atccctgcgg gtgtcccaag gaagcctggc     120

atgactcgtg atgacctttt taacatcaat gcgggcatcg tcaagtcgct tattgaggct     180

gttgcagaca actgcccaga ggccttcatc catatcatca gcaacccggt caactccact     240

gtgccgattg ctgctgagat tctgaaacag aagggtgtct acaaccccaa gaagctcttc     300

ggggtttcca ccctggatgt tgtcagagct aacacatttg tagctcagaa gaagaacctc     360

agcctcatcg atgttgatgt cccagttgtc ggtggccatg ctgggatcac gattctgcct     420

ctgttgtcca agactaggcc ttctgtcagc ttcacggacg aggaaactga acagctgaca     480

aagaggatac agaacgctgg gacagaggcg gtggaggcga aggctggtgc tggctctgct     540

actctgtcca tggcttatgc cgctgccaga tttgttgagt catcgctccg cgcaatggct     600

ggtgatccag atgtttacga gtgcacgtat gttcagtctg agttaacaga gcttccattc     660

ttcgcgtcca gagttaagct tgggaaggac ggngttgagt ccatcatttc ctccgacctg     720

gagggagtga cggagtacga ggccaaggcg cttgangcat tgaaggctga gctgaag       777
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M80678527.ST25

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tcatatacga ggaagtaatt attgataact gctgtatgac gctcgtgaag aaccctggta    120

cgtttgatgt attagtgatg ccaaatctat atggcgacat tattagtgat ctatgtgctg    180

gtttgatcgg aggcttgggc ctaactccca gctgcaacat tggtgaaggt ggcatttgtc    240

ttgcagaggc tgtccatggc tctgcacctg atatatctgg caagaacctg gcaaacccaa    300

ctgctcttat gctgagtgct gttatgatgt tgcgccactt gcaattnaac gaccaagcan    360

aacggatcca caatgctatc ctccagacta tcgncgaggg gaagnacana actg          414


<210>  184
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M80678527.ST25

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Lys Gln Xaa Xaa Leu Phe Xaa Xaa Cys Cys Arg Ala Ile Ala Xaa Lys
1   5   10   15

Tyr Pro Glu Ile Ile Tyr Glu Glu Val Ile Ile Asp Asn Cys Cys Met
            20   25   30

Thr Leu Val Lys Asn Pro Gly Thr Phe Asp Val Leu Val Met Pro Asn
            35   40   45

Leu Tyr Gly Asp Ile Ile Ser Asp Leu Cys Ala Gly Leu Ile Gly Gly
    50   55   60

Leu Gly Leu Thr Pro Ser Cys Asn Ile Gly Glu Gly Gly Ile Cys Leu
65   70   75   80

Ala Glu Ala Val His Gly Ser Ala Pro Asp Ile Ser Gly Lys Asn Leu
            85   90   95

Ala Asn Pro Thr Ala Leu Met Leu Ser Ala Val Met Met Leu Arg His
            100   105   110

Leu Gln Xaa Asn Asp Gln Ala Xaa Arg Ile His Asn Ala Ile Leu Gln
            115   120   125

Thr Ile Xaa Glu Gly Lys Xaa Xaa Thr
130   135

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<210>  185
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<213>  Lolium perenne
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aatccactac acagcttcga gctaccccgc ccccgcaatc caaactacct ctccctagca     120

aatctacaac atgaaggcag tcgtagctgg agccgccggt ggcattggac agccattgtc     180

cctcctcctt aagacctgcc cgctcgtcac tgagctcgcc ctatacgatg tcgtcaacgc     240

cgtcggtgtc gcgactgacc tctcccacat ctcctcgccc gcgaaagtaa ccggctacct     300

gccggcaaat gacggtatgc agcaggctct cactggcgcc gacatcgtgg tcatccccgc     360

tggtattccc cgcaagcccg gcatgacccg tgacgacctc ttcaagatca acgccggcat     420

tgtccagggt ctcatcgagg gtgtcgccaa gcactgcccc aaggcatacg ttctcgtcat     480

ctccaacccc gtcaactcga ctgtgcccat cgccgccgag gtgctgaaga aggccggtgt     540

cttcgacccc aagaagctct tcggtgtcac caccctcgat gtcgtccgcg ccgagacctt     600

cgttgccgag atcactggcg agaaggaccc agcgaagttg aacatncccg ta            652


<210>  186
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<213>  Lolium perenne


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<400>  186

Xaa Xaa Pro Xaa Thr Thr Leu Val Pro Gln Leu Leu Leu His Thr Ser
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M80678527.ST25

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1                 5                  10                    15

Leu Leu Leu Pro Ile His Tyr Thr Ala Ser Ser Tyr Pro Ala Pro Ala
        20              25              30

Ile Gln Thr Thr Ser Pro Gln Ile Tyr Asn Met Lys Ala Val Val Ala
        35              40              45

Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Leu Leu Leu Lys Thr
    50              55              60

Cys Pro Leu Val Thr Glu Leu Ala Leu Tyr Asp Val Val Asn Ala Val
65              70              75              80

Gly Val Ala Thr Asp Leu Ser His Ile Ser Ser Pro Ala Lys Val Thr
            85              90              95

Gly Tyr Leu Pro Ala Asn Asp Gly Met Gln Gln Ala Leu Thr Gly Ala
        100             105             110

Asp Ile Val Val Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr
        115             120             125

Arg Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Gln Gly Leu Ile
    130             135             140

Glu Gly Val Ala Lys His Cys Pro Lys Ala Tyr Val Leu Val Ile Ser
145             150             155             160

Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Leu Lys Lys
            165             170             175

Ala Gly Val Phe Asp Pro Lys Lys Leu Phe Gly Val Thr Thr Leu Asp
        180             185             190

Val Val Arg Ala Glu Thr Phe Val Ala Glu Ile Thr Gly Glu Lys Asp
        195             200             205

Pro Ala Lys Leu Asn Xaa Pro Val
210             215
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<210>    187
<211>    769
<212>    DNA
<213>    Lolium perenne

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M80678527.ST25

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gaaggatgct ggccgtttct ctgctggttg gcacttgtac aaagctcaag aggagcttat    120

taaggttgcg gagacgtttg gggttaagnt gactatgttt catggacgag ggggtactgt    180

tggaagaggt ggcggcccta cccatcttgc tatactgtca caacctccag atactgtcca    240

tggatcactt cgggtaactg ttcaaggtga agtcattgag cagtccttcg gagaggagca    300

tttgtgtttt agaacgcttc aacgttttac agctgctact cttgaacatg gtatgcatcc    360

accaatctca cctaaaccag aatggcgtgc tttgatggat gaaatggctg ttgttgccac    420

agaggaatac cgttccattg ttttccaaga accaagattt gttgagtatt ccgccttgc     480

aacaccagag ctcgagtatg gtaggatgaa tattggaagc aggccatcaa aacgtaagcc    540

aagcggagga atcgaatcat tgcgtgcaat tccttggata tttgcttgga cacagactag    600

attccacctg ccagtgtggc ttgnttttgg tgcggccttc aagcatgtcc tgcaaaagga    660

cattcgtant cttcaaatcc ttcagcagat gtacaacgag tggccgttta gggttaccat    720

aaacctggtt gagatggtgt ttgccaaggg cgatccaggt atagcagct              769
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<210>  188
<211>  256
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<213>  Lolium perenne

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M80678527.ST25

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<400>  188
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Xaa Thr Arg Asn Arg Ile Asn Gly Lys Xaa Glu Val Met Ile Gly Tyr
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Gln His Ser Gly Lys Asp Ala Gly Arg Phe Ser Ala Gly Trp His Leu
            20   25   30

Tyr Lys Ala Gln Glu Glu Leu Ile Lys Val Ala Glu Thr Phe Gly Val
        35   40   45

Lys Xaa Thr Met Phe His Gly Arg Gly Gly Thr Val Gly Arg Gly Gly
    50   55   60

Gly Pro Thr His Leu Ala Ile Leu Ser Gln Pro Pro Asp Thr Val His
65   70   75   80

Gly Ser Leu Arg Val Thr Val Gln Gly Glu Val Ile Glu Gln Ser Phe
            85   90   95

Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr Ala Ala
            100   105   110

Thr Leu Glu His Gly Met His Pro Pro Ile Ser Pro Lys Pro Glu Trp
        115   120   125

Arg Ala Leu Met Asp Glu Met Ala Val Val Ala Thr Glu Glu Tyr Arg
    130   135   140

Ser Ile Val Phe Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg Leu Ala
145   150   155   160

Thr Pro Glu Leu Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg Pro Ser
            165   170   175

Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile Pro Trp
            180   185   190

Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu Pro Val Trp Leu Xaa
        195   200   205

Phe Gly Ala Ala Phe Lys His Val Leu Gln Lys Asp Ile Arg Xaa Leu
    210   215   220

Gln Ile Leu Gln Gln Met Tyr Asn Glu Trp Pro Phe Arg Val Thr Ile

M80678527.ST25

225   230   235   240

Asn Leu Val Glu Met Val Phe Ala Lys Gly Asp Pro Gly Ile Ala Ala
              245   250   255

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<212>   DNA
<213>   Lolium perenne


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ttggtgctta catcatctca atggcaactg ccccatctga tgtgcttgct gttgagcttt     120
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                              M80678527.ST25
tgcagcggga gtgccatata aaaaagccat tgagagttgt tccactattt gaaaagcttg    180

cagatcttga ancagctcca gcatctgttg cacgactatt ttcaatagac tggtacatga    240

atagaatcaa tggcaagcag gaggtcatga ttggatactc agactctggg aaggacgctg    300

ggcgtctctc tgcagcgtgg caaatgtata aagcacaaga agatctcata aaggtggcaa    360

agcaatatgg agtaaagtta acaatgtttc atggaagagg tggaacggtt ggcagaggag    420

gtggtcccag tcatcttgct atattatctc aaccaccaga cacgatacaa ggatcacttc    480

gtgtaacagt tcaaggcgag gtcatagagc actcatttgg agaggaacac ttgtgcttca    540

gaactctgca acgtttcact gcagctactc ttgagcatgg aatgcatcct ccaatttcac    600

ccaagccaga atggcgtgct ataatggatg agatggctgt agtggcaaca aaagaatatc    660

gatcaattgt cttccaagaa ccacgttttg tcgaatactt ccgctcggca cacctgaga    720

ctgaatatgg tcggatgaat attggtagcc ggccatcaaa gagaaagcct agtggaggca    780

tagaatcgct ccgtgcaatt ccatggatct ttgcttggac acagacaagg tttcatcttc    840

ctgtatggct tggatttggt gcagcgttca aacatatcat gcagaaggac atcaggaata    900

tccatactct gaaagaaatg tacaatgagt ggccattctt tagggtcacc cttgacttgc    960

ttgagatggt ttttgccaag ggagatccag gaattgctgc tttatatgac aaattgcttg   1020

tgtctgaaga tctgcagccc tttggggagc agctgagaaa caactttgaa gagacgaaac   1080

agttactcct tcaggttgct ggccacaagg acgttcttga aggggatcct tacctgaagc   1140

agcgtctgcg gttgcgtgag tcatacatca caacattgaa tgtttgccaa gccnacaccc   1200

tgaagcggat aagagaccct agcttcgagg tgacaccgca gcaggcacct ctgtcgaagg   1260

agttcgctga tgagaaggag ccagctgagc tggtgcaact gaaccgtggg agcgagtacg   1320

ccccaggcct ggaggacacc ctcatcctta ccatgaaggg tatttgctgt ggaatgcaaa   1380

acacaggcta ggccagtttg cctatttgga ataactgtca tcccgtcaga tggggcgtga   1440

atatgtgtgt tccccaaatg ctagtgaacc ctggaggcat tttggccact tacatgcctt   1500

ttggttatgg atgnactttg atcttaatgn caagggttgt tgaagcctga tctaaataaa   1560

atatggaaca atgatattct ggtnggatct aataatttgc ttggctctgg catcgnaata   1620

gngatttgga gtngtttaac                                               1640
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<210>  190
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<213>  Lolium perenne


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<223>  Xaa can be any naturally occurring amino acid

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M80678527.ST25

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<400>  190
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Arg Ser Cys Xaa Cys Phe Lys Xaa Ile Xaa Val Leu Ala Glu Leu Pro
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Ala Asp Cys Phe Gly Ala Tyr Ile Ile Ser Met Ala Thr Ala Pro Ser
            20   25   30

Asp Val Leu Ala Val Glu Leu Leu Gln Arg Glu Cys His Ile Lys Lys
        35   40   45

Pro Leu Arg Val Val Pro Leu Phe Glu Lys Leu Ala Asp Leu Glu Xaa
    50   55   60

Ala Pro Ala Ser Val Ala Arg Leu Phe Ser Ile Asp Trp Tyr Met Asn
65   70   75   80

Arg Ile Asn Gly Lys Gln Glu Val Met Ile Gly Tyr Ser Asp Ser Gly
                85   90   95

Lys Asp Ala Gly Arg Leu Ser Ala Ala Trp Gln Met Tyr Lys Ala Gln
                100   105   110

Glu Asp Leu Ile Lys Val Ala Lys Gln Tyr Gly Val Lys Leu Thr Met
        115   120   125

Phe His Gly Arg Gly Gly Thr Val Gly Arg Gly Gly Gly Pro Ser His
    130   135   140

Leu Ala Ile Leu Ser Gln Pro Pro Asp Thr Ile Gln Gly Ser Leu Arg
145   150   155   160

Val Thr Val Gln Gly Glu Val Ile Glu His Ser Phe Gly Glu Glu His
                165   170   175

Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr Ala Ala Thr Leu Glu His
            180   185   190

Gly Met His Pro Pro Ile Ser Pro Lys Pro Glu Trp Arg Ala Ile Met
        195   200   205

M80678527.ST25

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Asp Glu Met Ala Val Val Ala Thr Lys Glu Tyr Arg Ser Ile Val Phe
    210             215             220

Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg Ser Ala Thr Pro Glu Thr
225             230             235             240

Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg Pro Ser Lys Arg Lys Pro
                245             250             255

Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile Pro Trp Ile Phe Ala Trp
            260             265             270

Thr Gln Thr Arg Phe His Leu Pro Val Trp Leu Gly Phe Gly Ala Ala
        275             280             285

Phe Lys His Ile Met Gln Lys Asp Ile Arg Asn Ile His Thr Leu Lys
    290             295                 300

Glu Met Tyr Asn Glu Trp Pro Phe Phe Arg Val Thr Leu Asp Leu Leu
305             310             315             320

Glu Met Val Phe Ala Lys Gly Asp Pro Gly Ile Ala Ala Leu Tyr Asp
            325             330             335

Lys Leu Leu Val Ser Glu Asp Leu Gln Pro Phe Gly Glu Gln Leu Arg
            340             345             350

Asn Asn Phe Glu Glu Thr Lys Gln Leu Leu Leu Gln Val Ala Gly His
        355             360             365

Lys Asp Val Leu Glu Gly Asp Pro Tyr Leu Lys Gln Arg Leu Arg Leu
    370             375             380

Arg Glu Ser Tyr Ile Thr Thr Leu Asn Val Cys Gln Ala Xaa Thr Leu
385             390             395             400

Lys Arg Ile Arg Asp Pro Ser Phe Glu Val Thr Pro Gln Gln Ala Pro
            405             410             415

Leu Ser Lys Glu Phe Ala Asp Glu Lys Glu Pro Ala Glu Leu Val Gln
            420             425             430

Leu Asn Arg Gly Ser Glu Tyr Ala Pro Gly Leu Glu Asp Thr Leu Ile
        435             440             445

Leu Thr Met Lys Gly Ile Cys Cys Gly Met Gln Asn Thr Gly
    450             455             460
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<211>  697
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M80678527.ST25

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<223>   n is a, c, g, or t

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gaagaagttg ctgatgtttt aagnacattt ntgtccttgc agagctccca gcagattgtt      60

ttggtgctta catcatctca atggcaactg ccccatctga tgtgcttgct gttgagcttt     120

tgcagcggga gtgccatata aaaaagccat tgagagttgt tccactattt gaaaagcttg     180

cagatcttga ancagctcca gcatctgttg cacgactatt ttcaatagac tggtacatga     240
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M80678527.ST25

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atagaatcaa tggcaagcag gaggtcatga ttggatactc agactctggg aaggacgctg     300

ggcgtctctc tgcagcgtgg caaatgtata aagcacaaga agatctcata aaggtggcaa     360

agcaatatgg agtaaagtta acaatgtttc atggaagagg tggaacggtt ggcagaggag     420

gtggtcccag tcatcttgct atattatctc aaccaccaga cacgatacaa ggatcacttc     480

gtgtaacagt tcaaggcgag gtcatagagc actcatttgg agaggaacac ttgtgcttca     540

naactctgca acgtttcact gcagctactc ttgagcatgg aatgcatcct ccaatttccc     600

ccaaaccaga atggcntgct ataatggatg anatggctgt agnggcacca aaagaaaatc     660

gatcaattgn cttccaagaa ccccnttttg ncnaata                              697
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<211>  785
<212>  DNA
<213>  Lolium perenne


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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<400>  192
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gtttcatgga agaggtggaa cggttggcag aggaggtggt cccagtcatc ttgctatatt     120

atctcaacca ccagacacga tacaaggatc acttcgtgta acagttcaag gcgaggtcat     180

agagcactca tttggagggg aacacttgtg cttcagaact ctgcaacgtt tcactgcagc     240

tactcttgag catggaatgc atcctccaat ttcacccaag ccagaatggc gtgctataat     300

ggatgagatg gctgtagtgg caacaaaaga atatcgatca attgtcttcc aagaaccacg     360

ttttgtcgaa tacttccgct cggcaacacc tgagactgaa tatggtcgga tgaatattgg     420

tagccggcca tcaaagagaa agcctagtgg aggcatagaa tcgctccgtg caattccatg     480

gatctttgct tggacacaga caaggtttca tcttcctgta tggcttggat ttggtgcagc     540

gttcaaacat atcatgcaga aggacatcag gaatatccat actctgaaag aaatgtacaa     600

tgagtggcca ttctttaggg tcacccttga cttgcttgag atggtttttg ccaagggaga     660

tccaggaatt gctgctttat atgacaaatt gcttgtgtct gaagatctgc agccctttgg     720

ggagcagctg anaaacaact ttgaagagac gaaacagnta ctctttaagg ttgttgncca     780

caagg                                                                 785
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<211>   783
<212>   DNA
<213>   Lolium perenne


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ttatctcaac cactagacac gatacaagga tcacttcgtg taacagttca aggcgaggtc     120

atagagcact catttggaga ggaacacttg tgcttcagaa ctctgcaacg tttcactgca     180

gctactcttg agcatggaat gcatcctcca atttcaccca agccagaatg gcgtgctata     240

atggatgaga tggctgtagt ggcaacaaaa gaatatcgat caattgtctt ccaagaacca     300

cgttttgtcg aatacttccg ctcggcaaca cctgagactg aatatggtcg gatgaatatt     360

ggtagccggc catcaaagag aaagcctagt ggaggcatag aatcgctccg tgcaattcca     420

tggatctttg cttggacaca gacgaggttt catcttcctg tatggcttgg atttggtgca     480

gcgttcaaac atatcatgca gaaggacatc aggaatatcc atactctgaa agaaatgtac     540

aatgagtggc cattctttag ggtcacccct gacttgcttg agatggtttt tgccaaggga   . 600

gatccaggga ttgctgcttt atatgacaaa ttgcttgtgt ctgaagatct gcagcccttt     660

ggggagcagc tgagaaacaa cttttgaagag acgaaacagt tactccttca ggttgctggc     720

cacaaggacg ttcttgaagg ggatccttac ctgaagcagc gtctgcgggt gcgtgagtca     780

tac                                                           .  . 783


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gatcacttcg tgtaacagtt caaggcgagg tcatagagca ctcatttgga gaggaacact     120

tgtgcttcag aactctgcaa cgtttcactg cagctactct tgagcatgga atgcatcctc     180

caatttcacc caagccagaa tggcgtgcta taatggatga gatggctgta gtggcaacaa     240

aagaatatcg atcaattgtc ttccaagaac cacgttttgt cgaatacttc cgctcggcaa     300

cacctgagac tgaatatggt cggatgaata ttggtagccg gccatcaaag agaaagccta     360

gtggaggcat agaatcgctc cgtgcaattc catggatctt tgcttggaca cagacaaggt     420

ttcatcttcc tgtatggctt ggatttggtg cagcgttcaa acatatcatg cagaaggaca     480
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tcaggaatat ccatactctg aaagaaatgt acaatgagtg gccattcttt agggtcaccc   540

ttgacttgct tgagatggtt tttgccgagg gagatccagg aattgctgct ttatatgaca   600

aattgcttgt gtctgaagat ctgcagccct ttggggagca gctgagaaac aactttgaag   660

agacgaaaca gttactcctt caggttgctg gccacaagga cgttcttgag ggggatcctt   720

acctgaagca gcgtctgcgg ttgcgtgagt catacatcac aaca   764

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<223>   n is a, c, g, or t

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<222>   (659)..(659)
<223>   n is a, c, g, or t

<400>   195
ggttttttgcn agggagatcc ggattgctgc tttatatgac aaaattgcttg tgtctgaaga   60

tctgcagccc tttggggagc ngctgagaaa caactttgaa gagacgaaac agttactcct   120

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tcaggttgct ggccacaagg acgttcttga aggggatcct tacctgaagc agcgtctgcg    180

gttgcgtgag tcatacatca caacattgaa tgtttgccaa gcctacaccc tgaagcggat    240

aagagaccct agcttcgagg tgacaccgca gcaggcacct ctgtcgaagg agttcgctga    300

tgagaaggag ccagctgagc tggtgcaact gaaccgtggg agcgagtacg ccccaggcct    360

ggaggacacc ctcatcctta ccatgaaggg tattgctgtg gaatgcaaaa cacaggctag    420

gccagtttgc ctattggaat aactgtcatt ccgtcagatg gggcgtgaat atgtgtgttc    480

cccaaatgct agtgaaccct ggaggcattt tggccactta catgcctttt ggttatgnat    540

gnacttgatc ttaatgncaa gggttgttga agcctgatct aaataaaata tggaacaatg    600

atattctggn ggatctaata atttgcttgg ctctggcatc gnaatagnga tttggagtng    660

tttaac                                                                666
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<211>   482
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<213>   Lolium perenne


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cacaacattg aatgtttgcc aagcgnncac cctgaagcgg ataagagacc ctagcttcga    120

ggtgacaccg cagcaggcac ctctgtcgaa ggagttcgct gatgagaagg agccagctga    180

gctggtgcaa ctgaaccgtg ggagcgagta cgccccaggc ctggaggaca ccctcatcct    240

taccatgaag ggtatttgct gtggaatgca aaacacaggc taggccagtt tgcctatttg    300

gaataactgt catcccgtca gatgggcgtg aatatgtgtg ttccccaaat gctagtgaac    360

cctggaggca tttggccact tacatgcctt ttggttatgg atgnactttg atcttaatgt    420

caanggttgt tgaagcctga tctaaatnaa atatggaaca atgatattct ggttgtttct    480

ta                                                                    482
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<210>   197
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M80678527.ST25

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<211>  224
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<213>  Lolium perenne


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<223>  n is a, c, g, or t

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gcacactgaa tatggtcggc atgaatattg gtagccggcc atcaaagaga aagcctagtg   120

gaggcataga atcgctccgt gcaattccat gcatctttgn ttggacacag acaaggnttn   180

atnttcctgt atgncttgna ttcgnctcca ccnccacccc cnta                    224


<210>  198
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<223>  Xaa can be any naturally occurring amino acid

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<223>  Xaa can be any naturally occurring amino acid

<400>  198
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Xaa Ser Xaa Leu Xaa Xaa Asn His Val Leu Xaa Glu Tyr Xaa Pro Leu
1   5   10   15

Gly Asn Thr Cys Thr Leu Asn Met Val Gly Met Asn Ile Gly Ser Arg
            20   25   30

Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile
        35   40   45

Pro Cys Ile Phe Xaa Trp Thr Gln Thr Arg Xaa Xaa Xaa Pro Val Xaa
    50   55   60

Leu Xaa Phe Xaa Ser Thr Xaa Thr Pro
65   70

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<211>  527
<212>  DNA
<213>  Lolium perenne

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<223>  n is a, c, g, or t

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cgtgacgcgt acatcaccac catgaacgta tgccaggcct acacattgaa gcggatccgt     120

gacccagact accacgtcgc actgcggccc catctttcca aggaggttat ggacacaagc     180

aagccggctt ccgagcttgt gacgctgaac ccggccagcg agtacgcccc ggggctggag     240

gacaccctca tcttgaccat gaagggcgtt gctgccggtc tgcaaaacac cggttagggc     300

caggagagat gcctgatcac catctttttg tatcttcatg atgatgcgat gttttttcttt    360

agtcgtttgc ggtgggcctt atatctctcg gacgtagctg catctgtctc cctgctcagt     420
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gaggaataat ggcgtttcgc ccaagtatat tgataaataa agggaaccga tgttaatttc    480

agatttgttt gttagtaatt gttctattta ttttgcgaaa aaaaaaa                  527
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<210>   200
<211>   98
<212>   PRT
<213>   Lolium perenne


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<220>
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<223>   Xaa can be any naturally occurring amino acid

<400>   200

Val Xaa Gly Xaa Lys Asp Leu Leu Glu Gly Asp Pro Tyr Leu Lys Gln
1               5                   10                  15


Arg Leu Arg Leu Arg Asp Ala Tyr Ile Thr Thr Met Asn Val Cys Gln
            20                  25                  30


Ala Tyr Thr Leu Lys Arg Ile Arg Asp Pro Asp Tyr His Val Ala Leu
        35                  40                  45


Arg Pro His Leu Ser Lys Glu Val Met Asp Thr Ser Lys Pro Ala Ser
    50                  55                  60


Glu Leu Val Thr Leu Asn Pro Ala Ser Glu Tyr Ala Pro Gly Leu Glu
65                  70                  75                  80


Asp Thr Leu Ile Leu Thr Met Lys Gly Val Ala Ala Gly Leu Gln Asn
                85                  90                  95


Thr Gly
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<210>   201
<211>   450
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<213>   Lolium perenne


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M80678527.ST25

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<223>   n is a, c, g, or t

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atagaagatc tgatgtttga gctctctatg tggcgctgca gtgatgaact tagggtccgt     120

gcagatgaag tacatctgtc ctcaaaaaaa aaatctgcaa agcattacat agagttctgg     180

aagcaagttc ctccaaatga accttatcgt gtcatacttg gcgatgtcag ggataaactg     240

tactatacgc gcgaacgttc tcgccacata ttgacaactg gaatttcaga cattccagaa     300

gngtcaactt ttactaatgt tgaactgttt ctggaacctc ttgagctgtg ctacagatcc     360

ttatcttnct gtggngacaa anctattgct ganggaagcc ttcttgattt ctngcgnncn     420

gnatcnactt tgtgggctta ctctngcgaa                                      450


<210>   202
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M80678527.ST25

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<223> Xaa can be any naturally occurring amino acid

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<223> Xaa can be any naturally occurring amino acid

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<223> Xaa can be any naturally occurring amino acid

<400> 202
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Val Thr Arg Ala Val Cys Leu Leu Ala Arg Xaa Met Ala Ala Asn Leu
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Tyr Phe Ser Gln Ile Glu Asp Leu Met Phe Glu Leu Ser Met Trp Arg
            20   25   30

Cys Ser Asp Glu Leu Arg Val Arg Ala Asp Glu Val His Leu Ser Ser
            35   40   45

Lys Lys Lys Ser Ala Lys His Tyr Ile Glu Phe Trp Lys Gln Val Pro
        50   55   60

Pro Asn Glu Pro Tyr Arg Val Ile Leu Gly Asp Val Arg Asp Lys Leu
65   70   75   80

Tyr Tyr Thr Arg Glu Arg Ser Arg His Ile Leu Thr Thr Gly Ile Ser

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                   85   90   95

Asp Ile Pro Glu Xaa Ser Thr Phe Thr Asn Val Glu Leu Phe Leu Glu
            100   105   110

Pro Leu Glu Leu Cys Tyr Arg Ser Leu Ser Xaa Cys Xaa Asp Lys Xaa
            115   120   125

Ile Ala Xaa Gly Ser Leu Leu Asp Phe Xaa Xaa Xaa Xaa Xaa Thr Leu
    130   135   140

Trp Ala Tyr Ser Xaa Glu
145   150

<210> 203
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<212> DNA
<213> Lolium perenne

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<223> n is a, c, g, or t

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cactccgggt gactgttcaa ggtgaagtta ttgagcagag ctttggggag gaacacttgt   120

gcttcaggac gctgcagcgt ttcacagctg ctactcttga gcatgggatg cgtccaccca   180

tttcaccaaa gccagagtgg cgagctcttc ttgatgagat ggctgtggtt gcaactgagg   240

aataccggtc aatcgtcttc caagaaccac gcttcgtcga gtatttccgc cttgcaacac   300

cagagacaga gtatggcagg atgaatatag gaagcaggcc atcaaagaga aaaccaagtg   360

gtggcattga atcactccgt gcaattccat ggatcttcgc atggacgcag acacggttcc   420

accttccagt ctggttgggc tttggtggtg cattcaagca tatcctcaag aaggacatca   480

gaaatttcca tatgctccag gagatgtaca acgagtggcc atttttcagg gtcacgatcg   540

atcttgttga gatggtgttc gccaagggta accctggcat tgctgccttg tatgacaggc   600

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M80678527.ST25

<210> 204
<211> 214
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<213> Lolium perenne

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<400> 204

Gly Gly Gly Pro Xaa His Leu Ala Xaa Leu Ser Xaa Pro Pro Xaa Thr
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Ile Asn Gly Ser Leu Arg Val Thr Val Gln Gly Glu Val Ile Glu Gln
            20   25   30

Ser Phe Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln Arg Phe Thr
            35   40   45

Ala Ala Thr Leu Glu His Gly Met Arg Pro Pro Ile Ser Pro Lys Pro
    50   55   60

Glu Trp Arg Ala Leu Leu Asp Glu Met Ala Val Val Ala Thr Glu Glu
65   70   75   80

Tyr Arg Ser Ile Val Phe Gln Glu Pro Arg Phe Val Glu Tyr Phe Arg
                85   90   95

Leu Ala Thr Pro Glu Thr Glu Tyr Gly Arg Met Asn Ile Gly Ser Arg
            100   105   110

Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser Leu Arg Ala Ile
    115   120   125

Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu Pro Val Trp
    130   135   140

Leu Gly Phe Gly Gly Ala Phe Lys His Ile Leu Lys Lys Asp Ile Arg
145   150   155   160

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```
Asn Phe His Met Leu Gln Glu Met Tyr Asn Glu Trp Pro Phe Phe Arg
             165                 170                 175

Val Thr Ile Asp Leu Val Glu Met Val Phe Ala Lys Gly Asn Pro Gly
             180                 185                 190

Ile Ala Ala Leu Tyr Asp Arg Leu Leu Val Ser Glu Glu Leu Gln Pro
             195                 200                 205

Leu Gly Asp Lys Leu Arg
             210
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<213>  Trifolium repens


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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
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<222>  (656)..(656)
<223>  n is a, c, g, or t

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atggccaaag acccagttcg tgttcttgtc actggtgctg caggacaaat tgggtatgct   120
cttgtcccta tgattgctag gggagtgatg ctcggccctg accagcctgt gatcctccac   180
atgcttgaca ttccacctgc agccgaatca ctcaacggtg ttaaaatgga gttggtggat   240
gctgcattcc ctcttcttaa aggagttgtt gctacaactg atgtggttga ggcatgcact   300
ggtgtcaata ttgccgttat ggttggtggg ttccctagaa aagaaggtat ggagaggaaa   360
gatgtgatga caaaaaatgt ctctatttac aagtctcagg cttctgccct tgaaaaacat   420
gctgctgcaa actgcaaggt tcttgttgtt gccaacccag caaacaccaa tgcattgatc   480
ttgaaggaat atgctccatc cattcctgag aaaaacattt ctgctttgac tagattggac   540
cataacaggg cactaggtca aatttctgaa agactaaacg ttgaagtttc tgatgtgaaa   600
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aatgttataa tatgggggaa atnattcatc aactcaatac cctgntgtna accacncaac   660

cgttaaaatc tcct   674

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<210>    206
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<213>    Trifolium repens


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<223>    Xaa can be any naturally occurring amino acid

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<223>    Xaa can be any naturally occurring amino acid

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<222>    (199)..(199)
<223>    Xaa can be any naturally occurring amino acid

<400>    206
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Met Ala Lys Asp Pro Val Arg Val Leu Val Thr Gly Ala Ala Gly Gln
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Ile Gly Tyr Ala Leu Val Pro Met Ile Ala Arg Gly Val Met Leu Gly
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Pro Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala Ala
            35   40   45

Glu Ser Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe Pro
        50   55   60

Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys Thr
65   70   75   80

Gly Val Asn Ile Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu Gly
                85   90   95

Met Glu Arg Lys Asp Val Met Thr Lys Asn Val Ser Ile Tyr Lys Ser
                100   105   110

Gln Ala Ser Ala Leu Glu Lys His Ala Ala Ala Asn Cys Lys Val Leu
            115   120   125

Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu Tyr
    130   135   140

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Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Ala Leu Thr Arg Leu Asp
145                 150                 155                 160


His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asn Val Glu Val
                165                 170                 175


Ser Asp Val Lys Asn Val Ile Ile Trp Gly Lys Xaa Phe Ile Asn Ser
            180                 185                 190


Ile Pro Xaa Cys Xaa Pro Xaa Asn Arg
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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>   n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (177)..(177)
<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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atggccaaag acccagttcg tgttcttgtc nctggtgctg caggacaact tgggtatgct     120

cttgtccta tgattgctag gggagtgatg ctcggncctg accannctgt gatcctncac      180

atgcttgaca ttncacctgg ag  .                                          202


<210>  208
<211>  559
<212>  DNA
<213>  Trifolium repens


<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
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<222>  (24)..(24)
<223>  n is a, c, g, or t

<400>  208
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tggccaaaga cccagttcgt gttcttgtca ctggtgctgc aggacaaatt gggtatgctc     120

tcgtccctat gattgctagg ggagtgatgc tcggccctga ccagcctgtg atcctccaca     180

tgcttgacat cccacctgca gccgaatcac tgaacggtgt aaaaatggag ttggtggatg     240

ctgcattccc tcttcttaaa ggagttgttg ctaccactga tgtggttgag gcatgcactg     300
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gggtcaatat tgccgttatg gttggcgggt tccctagaaa agaaggtatg gagaggaaag    360

atgtgatgac aaaaaatgtc tctatttaca agtctcaggc ttctgccctt gaaaaacatg    420

ctgctgcaaa ctgcaaggtt cttgttgttg ccaacccagc aaacaccaat gcattgatct    480

tgaaggaata tgctccatcc attcctgaga aaaacatttc tgctttgact agattggacc    540

ataacagggc acttggtca                                                559
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<210>   209
<211>   567
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<213>   Trifolium repens


<220>
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<223>   n is a, c, g, or t

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gccaaagacc cagttcgtgt tcttgtcact ggtgctgcag gacaaattgg gtatgctctt    120

gtccctatga ttgctagggg agtgatgctc ggccctgacc agcctgtgat cctccacatg    180

cttgacattc cacctgcagc cgaatcactc aacggtgtta aaatggagtt ggtggatgct    240

gcattccctc ttcttaaagg agttgttgct acaactgatg tggttgaggc atgcactggt    300

gtcaatattg ccgttatggt tggtgggttc cctagaaaag aaggtatgga gaggaaagat    360

gtgatgacaa aaaatgtctc tatttacaag tctcaggctt ctgcccttga aaaacatgct    420

gctgcaaact gcaaggttct tgttgttgcc aacccagcaa acaccaatgc attgatcttg    480

aaggaatatg ctccatccat tcctgagaaa aacatttctg ctttgactag attggaccat    540

aacagggcac taggtcaaat ttctgaa                                       567
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<210>   210
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<212>   DNA
<213>   Trifolium repens

<400>   210
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gccaaagacc cagttcgtgt tcttgtcact ggtgctgcag gacaaattgg gtatgctctt    120

gtccctatga ttgctagggg agtgatgctc ggccctgacc agcctgtgat cctccacatg    180

cttgacattc cacctgcagc cgaatcactg aacggtgtta aaatggagtt ggtggatgct    240

gcattccctc ttcttaaagg agttgttgct acaactgatg tggttgaggc atgcactggt    300

gtcaatattg ccgttatggt tggtgggttc cctagaaaag aaggtatgga gaggaaagat    360

gtgatgacaa aaaatgtctc tatttacaag tctcaggctt ctgcccttga aaaacatgct    420

gctgcaaact gcaaggttct tgttgttgcc aacccagcaa acaccaatgc attgatcttg    480

aaggaatatg ctccatccat tcctgagaaa aacatttctg ctttgactag attggaccat    540
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aacagggcac taggtcaaat ttctgaaaga ctaaa   575

<210> 211
<211> 606
<212> DNA
<213> Trifolium repens

<220>
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<222> (7)..(7)
<223> n is a, c, g, or t

<400> 211
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caaagaccca gttcgtgttc ttgtcactgg tgctgcagga caacttgggt atgctcttgt   120

ccctatgatt gctaggggag tgatgctcgg ccctgaccag cctgtgatcc tccacatgct   180

tgacattcca cctgcagccg aatcactcaa cggtgttaaa atggagttgg tggatgctgc   240

attccctctt cttaaaggag ttgttgctac aactgatgtg gttgaggcat gcactggtgt   300

caatattgcc gttatggttg gtgggttccc tagaaaagaa ggtatggaga ggaaagatgt   360

gatgacaaaa aatgtctcta tttacaagtc tcaggcttct gcccttgaaa aacatgctgc   420

tgcaaactgc aaggttcttg ttgttgccaa cccagcaaac accaatgcat tgatcttgaa   480

ggaatatgct ccatccattc ctgagaaaaa catttctgct ttgactagat tggaccataa   540

cagggcacta ggtcaaattt ctgaaagact aaacgttgaa gtttctgatg tgaaaaatgt   600

tataat   606

<210> 212
<211> 344
<212> DNA
<213> Trifolium repens

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<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, .or t

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<221> misc_feature
<222> (54)..(54)
<223> n is a, c, g, or t

<220>
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<222> (300)..(300)
<223> n is a, c, g, or t

<220>
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<222> (311)..(311)
<223> n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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<222>  (329)..(329)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (333)..(333)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (335)..(335)
<223>  n is a, c, g, or t

<220>
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<222>  (343)..(343)
<223>  n is a, c, g, or t

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aaagacccag ttcgtgttct tgtcactggt gctgcaggac aacttgggta tgctcttgtc   120

cctatgattg ctaggggagt gatgctcggc cctgaccagc ctgtgatcct ccacatgctt   180

gacattccac ctgcagccga atcactcaac ggtgttaaaa tggagttggt ggatgctgca   240

ttccctcttc ttaaaggagt tgttgctaca actgatgtgg ttgaggcatg cactggtgtn   300

aatattgacg ntatggntgg ngggttncnt acnanacaac gtnt                    344


<210>  213
<211>  558
<212>  DNA
<213>  Trifolium repens


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<223>  n is a, c, g, or t

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<220>
<221>  misc_feature
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<220>
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<222> (27)..(27)
<223> n is a, c, g, or t

<400> 213

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ttcgtgttct tgtcactggt gctgcaggac aaattgggta tgctcttgtc cctatgattg     120

ctaggggagt gatgctcggc cctgaccagc ctgtgatcct ccacatgctt gacattccac     180

ctgcagccga atcactcaac ggtgttaaaa tggagttggt ggatgctgca ttccctcttc     240

ttaaaggagt tgttgctaca actgatgtgg ttgaggcatg cactggtgtc aatattgccg     300

ttatggttgg tgggttccct agaaaagaag gtatggagag gaaagatgtg atgacaaaaa .   360

atgtctctat ttacaagtct caggcttctg cccttgaaaa acatgctgct gcaaactgca     420

aggttcttgt tgttgccaac ccagcaaaca ccaatgcatt gatcttgaag gaatatgctc     480

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gtcaaatttc tgaaagac                                                   558
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<210> 214
<211> 599
<212> DNA
<213> Trifolium repens

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<222> (4)..(4)
<223> n is a, c, g, or t

<400> 214

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gcantaaact cttttctatt gttcttattt cttcgatcta tttccatggc caagacccag      60

ttcgtgttct tgtcctggtg ctgcaggaca aattgggtat gctcttgtcc ctatgattgc     120.

tagggggagtg atgctcggcc ctgaccagcc tgtgatcctc cacatgcttg acattccacc     180

tgcagccgaa tcactcaacg gtgttaaaat ggagttggtg gatgctgcat tccctcttct     240

taaaggagtt gttgctacaa ctgatgtggt tgaggcatgc actggtgtca atattgccgt     300.

tatggttggt gggttcccta gaaaagaagg tatggagagg aaagatgtga tgacaaaaaa     360

tgtctctatt tacaagtctc aggcttctgc ccttgaaaaa catgctgctg caaactgcaa     420

ggttcttgtt gttgccaacc cagcaaacac caatgcattg atcttgaagg aatatgctcc     480

atccattcct gagaaaaaca tttctgcttt gactagattg gaccataaca gggcactagg     540

tcaaatttct gaaagactaa acgttgaagt ttctgatgtg aaaaatgtta taatctggg     599
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<210> 215
<211> 577
<212> DNA
<213> Trifolium repens

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<222> (24)..(24)
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<400> 215
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tgttcttgta ctggtgctgc aggacaactt gggtatgctc ttgtccctat gattgctagg   120

ggagtgatgc tcggccctga ccagcctgtg atcctccaca tgcttgacat tccacctgca   180

gccgaatcac tcaacggtgt taaaatggag ttggtggatg ctgcattccc tcttcttaaa   240

ggagttgttg ctacaactga tgtggttgag gcatgcactg gtgtcaatat tgccgttatg   300

gttggtgggt tccctagaaa agaaggtatg gagaggaaag atgtgatgac aaaaaatgtc   360

tctatttaca agtctcaggc ttctgccctt gaaaaacatg ctgctgcaaa ctgcaaggtt   420

cttgttgttg ccaacccagc aaacaccaat gcattgatct tgaaggaata tgctccatcc   480

attcctgaga aaacatttc tgctttgact agattggacc ataacagggc actaggtcaa   540

atttctgaaa gactaaacgt tgaagtttct gatgtgg   .   577

<210>   216
<211>   594
<212>   DNA
<213>   Trifolium repens

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<220>
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<400>   216
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tgttcttgtc actggtgctg caggacaaat tgggtatgct cttgtcccta tgattgctag   120

gggagtgatg ctcggccctg accagcctgt gatcctccac atgcttgaca ttccacctgc   180

agccgaatca ctcaacggtg ttaaaatgga gttggtggat gctgcattcc ctcttcttaa   240

aggagttgtt gctacaactg atgtggttga ggcatgcact ggtgtcaata ttgccgttat   300

ggttggtggg ttccctagaa aagaaggtat ggagaggaaa gatgtgatga caaaaaatgt   360

ctctatttac aagtctcagg cttctgccct tgaaaaacat gctgctgcaa actgcaaggt   420

tcttgttgtt gccaacccag caaacaccaa tgcattgatc ttgaaggaat atgctccatc   480

cattcctgag aaaaacattt ctgctttgac tagattggac cataacaggg cactaggtca   540

aatttctgaa agactaaacg ttgaagtttc tgatgtgaaa atgttataa tctg   594

<210>   217
<211>   653
<212>   DNA
<213>   Trifolium repens

<220>

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<221>  misc_feature
<222>  (319)..(319)
<223>  n is a, c, g, or t

<220>
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<222>  (327)..(327)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (387)..(387)
<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<222>  (624)..(624)
<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<222>  (635)..(635)
<223>  n is a, c, g, or t
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ggggagtgat gctcggccct gaccagcctg tgatcctcca catgcttgac attccacctg     180
cagccgaatc actcaacggt gttaaaatgg agttggtgga tgctgcattc cctcttctta     240
aaggagttgt tgctacaact gatgtggttg aggcatgcac tggtgtcaat attgccgtta     300
tggttggtgg gttccctana aaagaangta tggagaggaa agatgtgatg acaaaaatgt     360
ctctatttac aagtcttaag cttttgncct tgaaaaacat gctgctgcaa actgcaaggt     420
tcttgttgtt gncaacccac caaacaccaa tgcattgatc ttgaaggaat atgctccatn     480
cattcctgan aaaaacattt ntgctttgac tagattggac cataacaggg cactagggca     540
aatttntgaa anactaaacg ttgaagtttn tgatgtgaaa aatgttatat atgggggaaa     600
tnattcatca actcaatacc ctgntgtnaa ccacncaacc gttaaaatct cct            653
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<210> 218
<211> 1111
<212> DNA
<213> Trifolium repens

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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (14)..(15)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (20)..(20)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (27)..(27)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (55)..(55)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (66)..(66)
<223> n is a, c, g, or t

<400> 218
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tctctnaaca aaaactgttc ttcctctctt aatcttccct gttcgattcc ttccatttct     120
tcaaaaatgg ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg gcaaattggt     180
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·tatgcacttg tccctatgat tgctagggga gtgatgcttg gtcctgatca acctgtgatc   240
..cttcacatgc ttgatattcc tccagcagca gagtcattga atggagttaa gatggagttg   300
gtcgatgctg catttccact tcttaaaggt gttgttgcta caactgatgt tgttgaagca   360
tgcactggag tcaatattgc agtcatggtt ggtggattcc caagaaaaga aggtatggag   420
aggaaggatg tgatgtctaa gaacgtctct atttacaagt cccaggcttc tgcccttgaa   480
aagcatgctg ctgccaactg caaggttttg gttgttgcta acccagcaaa caccaatgca   540
ttgatcttga aggaatttgc tccatctatt ccagagaaaa acatttcttg tttgactaga   600
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gtaaagaatg tcattatctg gggtaatcat tcatcaactc agtatcctga tgtcaaccat   720
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Pro Asp Gln Pro Val Ile Leu His Met Leu Asp Ile Pro Pro Ala Ala
            35                  40                  45

Glu Ser Leu Asn Gly Val Lys Met Glu Leu Val Asp Ala Ala Phe Pro
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Leu Leu Lys Gly Val Val Ala Thr Thr Asp Val Val Glu Ala Cys Thr
65                  70                  75                  80

Gly Val Asn Ile Ala Val Met Val Gly Gly Phe Pro Arg Lys Glu Gly
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Met Glu Arg Lys Asp Val Met Ser Lys Asn Val Ser Ile Tyr Lys Ser
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Gln Ala Ser Ala Leu Glu Lys His Ala Ala Ala Asn Cys Lys Val Leu
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Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu Phe
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Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Cys Leu Thr Arg Leu Asp
145                 150             155                 160

His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Asn Val Gln Val
                165                 170             175

Ser Asp Val Lys Asn Val Ile Ile Trp Gly Asn His Ser Ser Thr Gln
            180                 185             190

Tyr Pro Asp Val Asn His Ala Thr Val Asn Thr Pro Ala Gly Glu Lys
        195                 200             205

Pro Val Arg Glu Leu Val Ser Asp Asp Ala Trp Leu Asn Gly Glu Phe
    210                 215                 220

Ile Ser Thr Val Gln Gln Arg Gly Ala Ala Ile Ile Lys Ala Arg Lys
225                 230                 235                 240

Leu Ser Ser Ala Leu Ser Ala Ala Ser Ala Ala Cys Asp His Ile Arg
                245                 250                 255

Asp Trp Val Leu Gly Thr Pro Gln Gly Thr Phe Val Ser Met Gly Val
            260                 265                 270

Tyr Ser Asp Gly Ser Tyr Asn Val Pro Ala Gly Leu Ile Tyr Ser Phe
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Pro Val Thr Thr Ala Asn Gly Glu Trp Lys Ile Val Gln Gly Leu Ser
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tgattgctag gggagtgatg cttggtcctg atcaacctgt gatcctacac atgcttgata     240

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ccagttcgtg ttctcgtcac tggtgctgca gggcaaattg gttatgcact tgtccctatg     180

attgctaggg gagtgatgct tggtcctgat caacctgtga tcctacacat gcttgatatt     240

ccacccgcag cagagtcatt gaatggagtt aagatggagt tggtcgatgc tgcatttcca     300

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gggagtgatg cttggtcctg atcaacctgt gatccttcac atgcttgata tccctccagc    240

agcagagtca ttgaatggag ttaaaatgga gttggtggat gctgcatttc cacttcttaa    300

aggtgttgtt gctacaactg atgttgttga agcatgcact ggagtcaata ttgcagtcat    360

ggttggtgga ttcccaagaa aagaaggtat ggagaggaag gatgtgatga ctaagaatgt    420

ctctatttac aagtcccagg cttctgccct tgaaaagcat gctgctgcca actgcaaggt    480

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cctcgttact ggtgctgcag gccaaattgg ttatgcactt gtccctatga ttgctagggg    180

agtgatgctt ggtcctgatc aacctgtgat ccttcacatg cttgatatcc ctccagcagc    240

agagtcattg aatggagtta aaatggagtt ggtggatgct gcatttccac ttcttaaagg    300

cgttgttgct acaactgatg ttgttgaagc atgcactgga gtcaatattg cagtcatggt    360
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tggtggattc  ccaagaaaag  aaggtatgga  gaggaaggat  gtgatgtcta  agaacgtctc     420

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aagtcccagg  cttctgccct  tgaaaagcat  gctgctgcca  actgcaaggt  tttggttatt     480

gctaacccag  caaataccaa  tgcattgatc  ttgaaggagt  ttgctccatc  tattccagag     540
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tactggtgct gcaggccaaa ttggttatgc acttgtccct atgattgcta ggggagtgat   180

gcttggtcct gatcaacctg tgatccttca catgcttgat atccctccag cagcagagtc   240

attgaatgga gttaaaatgg agttggcgga tgctgcattt ccacttctta aaggcgttgt   300

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ggccaaattg gttatgcact tgtccctatg attgctaggg gagtgatgct tggtcctgat     180

caacctgtga tccttgacat gcttgatatt gctgcagnag nagagtnatt gaatggagct     240

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gctgcngggc aaattggtta tgcacttgtc cctatgattg ctaggggagt gatgcttggt     180

cctgatcaac ctgtgatcct acacatgctt gatattccac ccgcagcaga gtcattgaat     240

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caagcttctg cccttgaaaa gcatgctgct gccaactgca aggttttggt tgttgctaac     480

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caactgatgt tgttgaggca tgcactggag tcaatattgc agtcatggtt ggtggattcc     360

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tgttcgattc cttccacttc ttcaaaaatg gccaaagacc cagttcgtgt tctcgtcact      120

ggtgctgcag ggcaaattgg ttatgcactt gtccctatga ttgctagggg agtgatgctt      180

ggtcctgatc aacctgtgat cctacacatg cttgatattc cacccgcagc agagtcattg      240

aatggagtta agatggagtt ggtcgatgct gcatttccac ttcttaaagg tgttgttgct      300

acaactgatg ttgttgaggc atgcactgga gtcaatatcg cagtcatggt tggtggattc      360

ccaagaaaag aaggtatgga gaggaaggat gttatgtcta agaacgtctc tatttacaag      420

tcccaagctt ctgcccttga aaagcatgct gctgccaact gcaaggtttt ggttgttgct      480

aacccagcaa acaccaatgc attgatcttg aaggaatttg ctccatctat tccagagaaa      540

aacatttctt gtttgactag acttgatcac aacagggcat tgggccaaat tt             592
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<210>    232
<211>    585
<212>    DNA
<213>    Trifolium repens


<220>
<221>    misc_feature
<222>    (2)..(2)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (10)..(10)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (15)..(15)
<223>    n is a, c, g, or t
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<220>
<221> misc_feature
<222> (22)..(22)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (26)..(26)
<223> n is a, c, g, or t

<400> 232
cntaaccctn actcnctctc tnaaanaaaa ctattcttat ctcttaatct tcgcggttcg    60

attccttccg tttcttcagc aatggccaaa gacccagttc gtttcctcgt tactggtgct   120

gcaggccaaa ttggttatgc acttgtccct atgattgcta ggggagtgat gcttggtcct   180

gatcaacctg tgatccttca catgcttgat atccctccag cagcagagtc attgaatgga   240

gttaaaatgg agttggtgga tgctgcattt ccacttctta aaggcgttgt tgctacaact   300

gatgttgttg aagcatgcac tggagtcaat attgcagtca tggttggtgg attcccaaga   360

aaagaaggta tggagaggaa ggatgtgatg actaagaatg tctctatttа caagtcccag   420

gcttctgccc ttgaaaagca tgctgctgcc aactgcaagg ttttggttat tgctaaccca   480

gcaaatacca atgcattgat cttgaaggag tttgctccat ctattccaga gaaaaacatt   540

tcagctttga ctagacttga tcacaacagg gcattgggcc aaatt              585
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<210>  233
<211>  462
<212>  DNA
<213>  Trifolium repens
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<220>
<221> misc_feature
<222> (10)..(10)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (13)..(13)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (16)..(16)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (20)..(20)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (87)..(87)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (392)..(392)
<223> n is a, c, g, or t
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<400> 233
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gtcatcactn ctnctncaan aaaaactgtt cttccactct taatcttccc tgttcgattc    60

cttctatttc ttcaaaaatg gccaaanacc cagttcgtgt tctcgtcact ggtgctgcag   120

gccaaattgg ttatgcactt gtccctatga ttgctagggg agtgatgctt ggtcctgatc   180

aacctgtgat ccttcacatg cttgatattc ctccagcagc agagtcattg aatggagtta   240

aaatggagtt ggtggatgct gcatttccac ttcttaaagg tgttgttgct acaactgatg   300

ttgttgaagc atgcactgga gtcaatattg cagtcatggt tggtggattc ccaagaaaag   360

aaggtatgga gaggaaggat gtgatgacta anaatgtctc tatttacaag tcccaggctt   420

ctgcccttga aaagcatgct gctgccaact gcaaggtttt gg                       462
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<210> 234
<211> 573
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (11)..(12)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, g, or t

<400> 234
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cactaaacct nnctnctctc tctctaaaca aaactgttct tcctctctta atcttccctg    60

ttcgattcct tccacttctt caaaaatggc caaagaccca gttcgtgttc tcgtcactgg   120

tgctgcaggg caaattggtt atgcacttgt ccctatgatt gctaggggag tgatgcttgg   180

tcctgatcaa cctgtgatcc tacacatgct tgatattcca cccgcagcag agtcattgaa   240

tggagttaag atggagttgg tcgatgctgc atttccactt cttaaaggtg ttgttgctac   300

aactgatgtt gttgaggcat gcactggagt caatatcgca gtcatggttg gtggattccc   360

aagaaaagaa ggtatggaga ggaaggatgt tatgtctaag aacgtctcta tttacaagtc   420

ccaagcttct gcccttgaaa agcatgctgc tgccaactgc aaggttttgg ttgttgctaa   480

cccagcaaac accaatgcat tgatcttgaa ggaatttgct ccatctattc cagagaaaaa   540

catttcttgt ttgactagac ttgatcacaa cag                                573
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<210> 235
<211> 603
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

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<220>
<221> misc_feature
<222> (8)..(8)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (16)..(16)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (19)..(19)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (26)..(26)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (50)..(50)
<223> n is a, c, g, or t

<400> 235
gnaccacnta aaactnctnc tctctnaaca aaactgttct tcctctcttn atcttccctg      60

tttgattcct tccgttcttc aaaaatggcc aaagacccag ttcgtgttct cgtcactggt     120

gctgcagggc aaattggtta tgcacttgtc cctatgattg ctaggggagt gatgcttggt     180

cctgatcaac ctgtgatcct acacatgctt gatattccac ccgcagcaga gtcattgaat     240

ggagttaaga tggagttggt cgatgctgca tttccacttc ttaaaggtgt tgttgctaca     300

actgatgttg ttgaggcatg cactggagtc aatatcgcag tcatggttgg tggattccca     360

agaaaagaag gtatggagag gaaggatgtt atgtctaaga acgtctctat ttacaagtcc     420

caagcttctg cccttgaaaa gcatgctgct gccaactgca aggttttggt tgttgctaac     480

ccagcaaaca ccaatgcatt gatcttgaag gaatttgctc catctattcc agagaaaaac     540

atttcttgtt tgactagact tgatcacaac agggcattgg gccaaatttc tgaaagattg     600

aat                                                                    603
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<210> 236
<211> 550
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (462)..(462)
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<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (482)..(482)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (532)..(532)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (545)..(545)
<223> n is a, c, g, or t

<400> 236
accacntaac cctcctnctc tcaaacaaaa actgttcttc cctcttaatc ttccctgttc   60

gattccttct atttcttcaa aaatggccaa agacccagtt cgtgttctcg tcactggtgc   120

tgcaggccaa attggttatg cacttgtccc tatgattgct aggggagtga tgcttggtcc   180

tgatcaacct gtgatccttc acatgcttga tattcctcca gcagcagagt cattgaatgg   240

agttaaaatg gagttggtgg atgctgcatt tccacttctt aaaggtgttg ttgctacaac   300

tgatgttgtt gaagcatgca ctggagtcaa tattgcagtc atggttggtg gattcccaag   360

aaaagaaggt atggagagga aggatgtgat gactaagaat gtctctattt acaagtccca .   420

ggcttctgcc cttgaaaagc atgctgctgc caactgcaag gntttgggta ttgctaaccc   480

ancaaatacc aatgcattga tcttgaagga gtttgctcca tctattccag anaaaaacat   540

ttcanctttg   550

<210> 237
<211> 591
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (5)..(5)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, g, or t

<400> 237
acacntaacc tnctnctctc tcaacaaaac tgttcttcct ctcttaatct tccctgtttg   60

attccttccg ttcttcaaaa atggccaaag acccagttcg tgttctcgtc actggtgctg   120

cagggcaaat tggttatgca cttgtcccta tgattgctag gggagtgatg cttggtcctg   180

atcaacctgt gatccttcac atgcttgata ttcctccagc agcagagtca ttgaatggag   240

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ttaagatgga gttggtcgat gctgcatttc cacttcttaa aggtgttgtt gctacaactg    300

atgttgttga ggcatgcact ggagtcaata ttgcagtcat ggttggtgga ttcccaagaa    360

aagaaggtat ggagaggaag gatgtgatgt ctaagaacgt ctctatttac aagtcccagg    420

cttctgccct tgaaaagcat gctgctgcca actgcaaggt tttggttgtt gctaacccag    480

caacaccaat gcattgatct tgaaggaatt tgctccatct attccagaga aaaacatttc    540

ttgtttgact agacttgatc acaacagggc attgggccaa atttctgaaa g             591
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<210>   238
<211>   571
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (4)..(4)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (16)..(17)
<223>   n is a, c, g, or t
<400>   238
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gtancctcac tctctnnaac aaaaactgtt cttccctctt aatcttccct gttcgattcc     60

ttctatttct tcaaaaatgg ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg    120

ccaaattggt tatgcacttg tccctatgat tgctagggga gtgatgcttg gtcctgatca    180

acctgtgatc cttcacatgc ttgatattcc tccagcagca gagtcattga atggagttaa    240

aatggagttg gtggatgctg catttccact tcttaaaggt gttgttgcta caactgatgt    300

tgttgaagca tgcactggag tcaatattgc agtcatggtt ggtggattcc caagaaaaga    360

aggtatggag aggaaggatg tgatgactaa gaatgtctct atttacaagt cccaggcttc    420

tgcccttgaa aagcatgctg ctgccaactg caaggttttg gttattgcta acccagcaaa    480

taccaatgca ttgatcttga aggagtttgc tccatctatt ccagagaaaa acatttcagc    540

tttgactaga cttgatcaca acagggcatt g                                    571
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<210>   239
<211>   433
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (9)..(9)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (28)..(28)
<223>   n is a, c, g, or t
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<220>
<221>  misc_feature
<222>  (358)..(358)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (386)..(386)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (402)..(402)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (404)..(406)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (409)..(409)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (413)..(413)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (416)..(416)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (430)..(430)
<223>  n is a, c, g, or t

<400>  239
gcatctctna aacaaaaact gttcttcnct cttaatcttc cctgttcgat tccttctatt      60

tcttcaaaaa tggccaaaga cccagttcgt gttctcgtca ctggtgctgc aggccaaatt     120

ggttatgcac ttgtccctat gattgctagg ggagtgatgc ttggtcctga tcaacctgtg     180

atccttcaca tgcttgatat tcctccagca gcagagtcat tgaatggagt taaaatggag     240

ttggtggatg ctgcatttcc acttcttaaa ggtgttgttg ctacaactga tgttgttgaa     300

gcatgcactg gagtcaatat tgcagtcatg gttggtggat tcccaagaaa agaaggtntg     360

gagaggaagg atgtgatgac taagantgtc tctatttaca anannnagnc ttntgncctt     420

gaaaaagatn ctg                                                        433


<210>  240
<211>  585
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (10)..(10)
<223>  n is a, c, g, or t
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```
<220>
<221> misc_feature
<222> (35)..(35)
<223> n is a, c, g, or t

<400> 240
tcaccctctn aacaaaaact gttcttcctc ccttnatctt ccctgtttga ttccttccgt      60

tcttcaaaaa tggccaaaga cccagttcgt gttctcgtca ctggtgctgc agggcaaatt     120

ggttatgcac ttgtccctat gattgctagg ggagtgatgc ttggtcctga tcaacctgtg     180

atccttcaca tgcttgatat tcctccagca gcagagtcat tgaatggagt taagatggag     240

ttggtcgatg ctgcatttcc acttcttaaa ggtgttgttg ctacaactga tgttgttgag     300

gcatgcactg gagtcaatat tgcagtcatg gttggtggat tcccaagaaa agaaggtatg     360

gagaggaagg atgtgatgtc taagaacgtc tctatttaca agtcccaggc ttctgccctt     420

gaaaagcatg ctgctgccaa ctgcaaggtt ttggttgttg ctaacccagc aaacaccaat     480

gcattgatct tgaaggaatt tgctccatct attccagaga aaaacatttc ttgtttgact     540

agacttgatc acaacagggc attgggccaa atttctgaaa gattg                     585


<210>  241
<211>  610
<212>  DNA
<213>  Trifolium repens


<220>
<221> misc_feature
<222> (6)..(6)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (30)..(30)
<223> n is a, c, g, or t

<400>  241
tctctnaaca aaaactgttc ttccctcttn atcttccctg ttcgattcct tctatttctt      60

caaaaatggc caaagaccca gttcgtgttc tcgtcactgg tgctgcaggc caaattggtt     120

atgcacttgt ccctatgatt gctaggggag tgatgcttgg tcctgatcaa cctgtgatcc     180

ttcacatgct tgatattcct ccagcagcag agtcattgaa tggagttaaa atggagttgg     240

tggatgctgc atttccactt cttaaaggtg ttgttgctac aactgatgtt gttgaagcat     300

gcactggagt caatattgca gtcatggttg gtggattccc aagaaaagaa ggtatggaga     360

ggaaggatgt gatgactaag aatgtctcta tttacaagtc ccaggcttct gcccttgaaa     420

agcatgctgc tgccaactgc aaggttttgg ttattgctaa cccagcaaat accaatgcat     480

tgatcttgaa ggagtttgct ccatctattc cagagaaaaa catttcagct ttgactagac     540

ttgatcacaa cagggcattg gccaaatttc tgaaagatt gaatattcaa gtttctgatg     600

taaagaatgt                                                             610
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<210>  242
<211>  568
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (53)..(53)
<223>  n is a, c, g, or t

<400>  242
caaaaactgc tcttcctctc ttnatcttcc ctgttcgatt ccttcccttc ttnaaaatgg     60

ccaaagaccc agttcgtgtt ctcgtcactg gtgctgcagg gcaaattggt tatgcacttg    120

tccctatgat tgctaggggga gtgatgcttg gtcctgatca acctgtgatc ctacacatgc    180

ttgatattcc acccgcagca gagtcattga atggagttaa gatggagttg gtcgatgctg    240

catttccact tcttaaaggt gttgttgcta caactgatgt tgttgaggca tgcactggag    300

tcaatatcgc agtcatggtt ggtggattcc caagaaaaga aggtatggag aggaaggatg    360

ttatgtctaa gaacgtctct atttacaagt cccaagcttc tgcccttgaa aagcatgctg    420

ctgccaactg caaggttttg gttgttgcta acccagcaaa caccaatgca ttgatcttga    480

aggaatttgc tccatctatt ccagagaaaa acatttcttg tttgactaga cttgatcaca    540

acagggcatt gggccaaatt tctgaaag                                        568


<210>  243
<211>  558
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (21)..(21)
<223>  n is a, c, g, or t

<400>  243
aaaactgttc ttcctctctt natcttccct gttcgattcc ttcccttctt caaaaatggc     60

caaagaccca gttcgtgttc tcgtcactgg tgctgcaggg caaattggtt atgcacttgt    120

ccctatgatt gctagggggag tgatgcttgg tcctgatcaa cctgtgatcc tacacatgct    180

tgatattcca cccgcagcag agtcattgaa tggagttaag atggagttgg tcgatgctgc    240

atttccactt cttaaaggtg ttgttgctac aactgatgtt gttgaggcat gcactggagt    300

caatatcgca gtcatggttg gtggattccc aagaaaagaa ggtatggaga ggaaggatgt    360

tatgtctaag aacgtctcta tttacaagtc ccaagcttct gcccttgaaa agcatgctgc    420

tgccaactgc aaggttttgg ttgttgctaa cccagcaaac accaatgcat tgatcttgaa    480

ggaatttgct ccatctattc cagagaaaaa catttcttgt ttgactagac ttgatcacaa    540
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M80678527.ST25

caggggcattg ggccaaat   558

<210> 244
<211> 752
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (2)..(3)
<223> n is a, c, g, or t

<400> 244
gnnttcttcc tctcttcaac ttccctgttt gattccttcc agttcttcaa aaatggccaa   60

agacccagtt cgtgttctcg tcactggtgc tgcagggcaa attggttatg cacttgtccc   120

tatgattgct aggggagtga tgcttggtcc tgatcaacct gtgatccttc acatgcttga   180

tattcctaca gcagcagagt cattgaatgg agttaagatg gagttggtcg atgctgcatt   240

tccacttctt aaaggtgttg ttgctacaac tgatgttgtt gaggcatgca ctggagtcaa   300

tattgcagtc atggttggtg gattcccaag aaaagaaggt atggagagga aggatgtgat   360

gtctaagaac gtctctattt acaagtccca ggcttctgcc cttgaaaagc atgctgctgc   420

caactgcaag gttttggttg ttgctaaccc agcaaacacc aatgcattga tcttgaagga   480

atttgctcca tctattccag agaaaaacat ttcttgtttg actagacctg atcacaacag   540

ggcattgggc caaatttctg aaagattgaa tgttcaagtt tctgatgtaa agaatgtcat   600

tatctggggt aatcattcat caactcagta tcctgatgtc aaccatgcaa ctgttaacac   660

ccccgctggg gagaagcctg tccgtgagct tgtttctgat gacgcctggt tgaatggaga   720

attcatatct accgttcaac aacgtggtgc tg   752

<210> 245
<211> 583
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (17)..(17)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (46)..(46)
<223> n is a, c, g, or t

<400> 245
ggttcttccc tcttatnctt ccctgttcga ttccttctat ttcttnaaaa tggccaaaga   60

cccagttcgt gttctcgtca ctggtgctgc aggccaaatt ggttatacac ttgtccctat   120

gattgctagg ggagtgatgc ttggtcctga tcaacctgtg atccttcaca tgcttgatat   180

tcctccagca gcagagtcat tgaatggagt taaaatggag ttggtggatg ctgcatttcc   240

acttcttaaa ggtgttgttg ctacaactga tgttgttgaa gcatgcactg gagtcaatat   300

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tgcagtcatg gttggtggat tcccaagaaa agaaggtatg gagaggaagg atgtgatgac   360

taagaatgtc tctatttaca agtcccaggc ttctgccctt gaaaagcatg ctgctgccaa   420

ctgcaaggtt ttggttattg ctaacccagc aaataccaat gcattgatct tgaaggagtt   480

tgctccatct attccagaga aaaacatttc agctttgact agacttgatc acaacagggc   540

attgggccaa atttctgaaa gattgaatat tcaagtttct gat   583

<210> 246
<211> 573
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (11)..(11)
<223> n is a, c, g, or t

<400> 246
ttcctctctt natcttccct gtttgattcc ttccgttctt caaaatggcc aagacccagt   60

tcgtgttctc gtcactggtg ctgcagggca aattggttat gcacttgtcc ctatgattgc   120

taggggagtg atgcttggtc ctgatcaacc tgtgatcctt cacatgcttg atattcttcc   180

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ccatgcaact gttaacaccc ccgctgggga gaagcctgtc cgtgagcttg tttctgatga    360

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cgtggctatg ctaccgaacc agttccagaa cgcaaggtgg ccattctcgg cgctgccggc     240
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Arg Lys Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu
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Ser Leu Leu Met Lys Leu Asn Pro Leu Val Ser Thr Leu Ser Leu Tyr
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Asp Ile Ala Gly Thr Pro Gly Val Ala Ala Asp Val Ser His Ile Asn
65   70   75   80

Ser Arg Ser Glu Val Thr Gly Tyr Ala Gly Glu Glu Glu Leu Gly Lys
                85   90   95

Ala Leu Glu Gly Ala Asp Val Val Ile Ile Pro Ala Gly Val Pro Arg
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Lys Pro Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile

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Val Lys Ser Leu Ala Thr Ala Ile Ser Lys Tyr Cys Pro His Ala Leu
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Val Asn Met Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala
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Glu Val Phe Lys Lys Ala Gly Thr Tyr Asp Glu Lys Arg Leu Phe Gly
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Val Thr Thr Leu Asp Val Val Arg Ala Lys Thr Phe Tyr Ala Gly Lys
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Ala Lys Val Pro Val Ala Glu Val Asn Val Pro Val Ile Gly Gly His
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Ala Gly Val Thr Ile Leu Pro Leu Phe Xaa Gln Ala Thr Pro Gln Ala
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Asn Leu Gly Asp Asp Thr Leu Lys Xaa Leu Thr Xaa Xaa Thr Gln Asp
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Leu Ser Met Ala Tyr Ala Gly Ala Ile Phe Ala Asp Ala Xaa Leu Lys
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Xaa Leu Asn Gly Val Pro Asp Val Ile Glu Cys Ser Tyr Val Gln Ser
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Asn Ile Ile Ser Asp Leu Pro Phe Phe Ala Ser Lys Val Arg Ile Gly
    290   295   300

Lys Asn Gly Val Glu Glu Ile Leu Gly Leu Gly Ser Leu Thr Asp Phe
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taattcctgc tggtgtgccc agaaagcctg gaatgactcg tgatgatctt ttcaatatta   480

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gttccagaac gcaaggtggc cattctcggc gctgccggcg ggatcggcca gcctctctct   240

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tgatgtcagc cacatcaact ccagatctga ggtaactggg tatgcaggtg aagaagagct     360

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tgtcagccac atcaactcca gatctgaggt aactgggtat gcaggtgaag aagagcttgg     360

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gccattctcg gcgctgccgg cgggatcggc cagcctctct ctcttctcat gaagctcaac     240

cctctcgttt caaccctatc tctttatgat attgctggaa cccctggtgt cgccgctgat     300

gtcagccaca tcaactccag atctgaggta actgggtatg caggtgaaga agagcttgga     360

aaagctttgg agggtgctga tgttgttata attcctgccg gtgtgcccag aaagcctgga     420

atgactcgtg atgatctttt caatattaac gctggcattg tcaagtcact tgccactgct     480

atttctaagt actgcccccca tgcccttgtt aacatgataa gcaaccctgt gaactccacc     540

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cgcgcctctt ctcacctaac ccgccgtggc tatgctaccg aaccagttcc agaacgcaag   180

gtggccattc tcggcgctgc cggcgggatc ggccagcctc tctctcttct catgaagctc   240

aaccctctcg tttcaaccct atctctttat gatattgctg gaacccctgg tgtcgccgct   300

gatgtcagcc acatcaactc cagatctgag gtaactgggt atgcaggtga agaagagctt   360

ggaaaagctt tggagggtgc tgatgttgtt ataattcctg ccggtgtgcc cagaaagcct   420

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gaaaagcttt ggagggtgct gatgttgtta taattcctgc tggtgtgccc agaaagcctg   420

gaatgactcg tgatgatctt ttcaatatta cgctggcat tgtcaagtca cttgccactg    480

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gcctcttctc acctaacccg ccgtggctat gctaccgaac cagttccaga acgcaaggtg      180

gccattctcg gcgctgccgg cgggatcggc cagcctctct ctcttctcat gaagctcaac      240

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gttcccattg ctgcagaggt tttcaagaag gcagggacat atgacgagaa gagattgttt      600

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ccattctcgg cgctgccggc gggatcggcc agcctctctc tcttctcatg aagctcaacc   240

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gtcaagtcac ttgccactgc tatttctaag tactgccccc atgcccttgt aacatgata      480

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cctggtgtcg ccgctgatgt cagccacatc aactccagat ctgaggtaac tgggtatgca     300

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aaccctgtga actccaccgt tcccattgct gcagaggttt tcaagaaggc agggacatat     540

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ccagttccag aacgcaaggn ggccattctc ggtgctgccg gcgggatcgg acagcctctc   180

tctcttctca tgaagctcaa ccctctcgtt tcaaccctat ctctttatga tattgctgga   240
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gagaagagat tgtttggggt tacaaccctt gatgtagtca gggcaaaaac tttctatgct    360

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at                                                                    722
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ccgttcccat tgctgcagag gttttcaaga aggcagggac atatgacgag aagagattgt    300

ttggggttac aacccttgat gtagtcaggg caaaaacttt ctatgctggg aaagctaaag    360

ttccagttgc cgaggtcaat gtacctgtta taggaggcca tgcaggagtt actattctcc    420

cattattttc tcaggcaaca cctcaagcca atctggatga tgataccatt aaggctctaa    480

cggcaaggac acaagatgga ggaacagaag ttgtgaccgc caaggctgga aagggttctg    540

caactttgtc aatggct                                                    557
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M80678527.ST25

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ggtgtggaag agattctg                                                  138


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M80678527.ST25

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tttgcttcca  ggtgaggatt  gggaagaatg  gtgtggaaga  aattctgggc  ttaggttctc     120

tcacagattt  cgagcaacaa  ggccttgaaa  acctcaaggc  tgaactcaaa  tcatctattg     180

aaaagggaat  caaatttgcc  tcccagtaat  cgaacatgtc  atacattact  ggatttttcc     240

atttagaacc  agatcaaatt  ttgcaaattc  agaacaattg  tttgtaatgt  tgccggtagg     300

tataccccta  gatttaataa  gtaaatctgc  gagagcagtt  tattgctgca  gggactgaaa     360

ttaaaaccag  ttttaggttg  gcctttccat  tcgtaatggc  ccttcattgt  tgcatgnttt     420

catataatgc  aattgaaggg  tgntggncan  cgatacacan  ccccc                      465


<210>  271
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M80678527.ST25

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ttggaactgc ccaaacaggg aggccacttc ctcaatcaaa cccttttggt ttgaaagtca   180

attcccaggt taattttaag accttctctg gtctcaaggc catgtcatct ctaagatgcg   240

agtctgaatc atctttcttt ggcaacgaaa ctagtgctgc tctgcgtgca acttttgcac   300

ccaaagctca aaaggaaaac caaaacatca accgcaattt gcatcctcag gcatcctaca   360

aagtggcggt tcttggtgct gcaggaggaa ttggtcagcc actggcactt ctcattaaga   420

tgtcgccttt ggtttccgac ctgcatcttt atgatatcgc gaatgttaag ggagttgctg   480

ctgatatcag tcattgcaac actccttcaa aggttttgga tttcacaggt gcttctgagt   540

tggcaaattg tttgaaaggt gtggatgtag ttgttatacc tgctggtgtt cccagaaa    598
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<400>  272
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1   5   10   15

Gly Arg Pro Leu Pro Gln Ser Asn Pro Phe Gly Leu Lys Val Asn Ser
                 20   25   30

Gln Val Asn Phe Lys Thr Phe Ser Gly Leu Lys Ala Met Ser Ser Leu
             35   40   45

Arg Cys Glu Ser Glu Ser Ser Phe Phe Gly Asn Glu Thr Ser Ala Ala
         50   55   60

Leu Arg Ala Thr Phe Ala Pro Lys Ala Gln Lys Glu Asn Gln Asn Ile
65   70   75   80

Asn Arg Asn Leu His Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly
                     85   90   95

Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Ile Lys Met Ser
                 100   105   110

Pro Leu Val Ser Asp Leu His Leu Tyr Asp Ile Ala Asn Val Lys Gly
             115   120   125

Val Ala Ala Asp Ile Ser His Cys Asn Thr Pro Ser Lys Val Leu Asp
         130   135   140

M80678527.ST25

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Phe Thr Gly Ala Ser Glu Leu Ala Asn Cys Leu Lys Gly Val Asp Val
145               150               155               160

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ttggaactgc ccaaacaggg aggccacttc ctcaatcaaa cccttttggt ttgaaagtca     180

attcccaggt taattttaag accttctctg gtctcaaggc catgtcatct ctaagatgcg     240

agtctgaatc atctttcttt ggcaacgaaa ctagtgctgc tctgcgtgca acttttgcac     300

ccaaagctca aaaggaaaac caaaacatca accgcaattt gcatcctcag gcatcctaca     360

aagtggcggt tcttggtgct gcaggaggaa ttggtcagcc actggcactt ctcattaaga     420

tgtcgccttt ggtttccgac ctgcatcttt atgatatcgc gaatgttaag ggagttgctg     480

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tggcaaattg tttg                                                      554
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cattaccatt cattcccaga ggtcgagatg gcagcatcag cagcagctac ttttactatt     120
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M80678527.ST25

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ggaactgccc  aaacagggag  gccacttcct  caatcaaacc  cttttggttt  gaaagtcaat      180

tcccaggtta  attttaagac  cttctctggt  ctcaaggcca  tgtcatctct  aagatgcgag      240

tctgaatcat  ctttctttgg  caacgaaact  agtgctgctc  tgcgtgcaac  ttttgcaccc      300

aaagctcaaa  aggaaaacca  aaacatcaac  cgcaatttgc  atcctcaggc  atcctacaaa      360

gtggcggttc  ttggtgctgc  aggaggaatt  ggtcagccac  tggcacttct  cattaagatg      420

tcgcctttgg  tttccgacct  gcatctttat  gatatcgcga  atgttaaggg  agttgctgct      480

gatatcagtc  attgcaacac  tccttcaaag  gttttggatt  tcacaggtgc  ttctgagttg      540

gcaaattgtt  tgaaaggtgt  ggatgtagtt  gttatacctg  ctggtgttcc  cag             593
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gcccaaacag  ggaggtcact  tcctcaatca  aacccttttg  gtttgaaagt  caattcccag      180

gttaatttta  agaccttctc  tggtctcaag  gccatgtcgt  ctctaagatg  cgagtctgaa      240

tcatctttct  ttggcaacga  aacttgtgct  gctctgcgtg  caacttttgc  acccaaagct      300

caaaaggaaa  accgaaacat  caaccgcaat  ttgcagcctc  aggcatccta  caaagtggcg      360

gttctcggtg  ctgcaggagg  aattggtcag  ccacttgcac  ttctcattaa  gatgtcgcct      420

ttggtttccg  acctgcatct  ttatgacatt  gcgaatgtta  agggagttgc  tgctgatatc      480

agccattgca  acactccttc  aaaggttttg  gatttcacag  gtgcttctga  gctagcaaat      540

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M80678527.ST25

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attgcaagaa tctctgctca tcttcaacct ccaaatttcc aggaaggagg tgatgttgca   180

attagcaaag ctaactgcag agcaaaaggt ggggcgccgg gattcaaagt agcaatcttg   240

ggggctgctg gtggaattgg tcaatccctt tctttgctgt tgaagatcaa tccattggtt   300

tcagttcttc atctttatga tgttgtcaac actcctggtg tcactgctga tgttagtcac   360

attgacaccg gtgctgtggt tcgtggcttt ctagggcagg cacaacttga gaatgcactt   420

acaggcatgg acttggtcgt tatacctgct ggtgtgccga ggaaacctgg aatgacaagg   480

gatgacttat ttaagataaa tgctggaatt gtgaggactc ttagcgaagg aattgccaag   540

agctgtccta atgcaattgt caacttgatt agcaatccag tgaattccac tgtgccaatt   600

gctgctgagg tttttcaagaa agccggtaca tatgatccaa agcgactttt aggggttaca   660

accctcgatg ttgtgagggc aaatacckst gtggcagaag tacttggtgt tgatccaaga   720

M80678527.ST25

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gaggttgatg ttccagtggt aggagggcac gcaggagtca caatattacc tcttttgtca    780

caggttaagc ctcccagtag cttcaccgca gaagaaaccg aatacctgac aaancgcatt    840

caaaanggcg gaacacaagt tgttgaggca aaggctgggg ctggttcggc aacactantn    900

atggcctatg cagctgccaa gtttgctaac gcatgcctcc gtggcttgaa aggagaagcc    960

gggatagtgg agtgtgcttt tgttgattct caggttacgg aacttccttt ctttgcagcc   1020

aaggttcgtc ttggtcgcgg tggagcagaa gagatatatc aacttggtcc ccttaatgag   1080

tatgagagga ttggattaga aaaagcgaag aaagagttag caggaagcat ccagaaggga   1140

gtagaattca tcaaaaaaaa anaaagataa ggaaaaatta gttttgtatt gnctctttct   1200

atatctataa agaacttgtg taataattcc          .                         1230
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<210> 277
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<400> 277

Met Glu Ala His Ala Ala Gly Ala Asn Gln Arg Ile Ala Arg Ile Ser
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Ala His Leu Gln Pro Pro Asn Phe Gln Glu Gly Gly Asp Val Ala Ile
            20   25   30

Ser Lys Ala Asn Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys Val
        35   40   45

Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Ser Leu Ser Leu Leu
    50   55   60

Leu Lys Ile Asn Pro Leu Val Ser Val Leu His Leu Tyr Asp Val Val
65   70   75   80

Asn Thr Pro Gly Val Thr Ala Asp Val Ser His Ile Asp Thr Gly Ala
                85   90   95

Val Val Arg Gly Phe Leu Gly Gln Ala Gln Leu Glu Asn Ala Leu Thr
                        Page 242

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                              M80678527.ST25
            100                    105                    110


Gly Met Asp Leu Val Val Ile Pro Ala Gly Val Pro Arg Lys Pro Gly
        115                 120                 125


Met Thr Arg Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Arg Thr
    130                 135                 140


Leu Ser Glu Gly Ile Ala Lys Ser Cys Pro Asn Ala Ile Val Asn Leu
145                 150                 155                 160


Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe
                165                 170                 175


Lys Lys Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr Thr
            180                 185                 190


Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly Val
        195                 200                 205


Asp Pro Arg Glu Val Asp Val Pro Val Val Gly Gly His Ala Gly Val
210                 215                 220


Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro Pro Ser Ser Phe Thr
225                 230                 235                 240


Ala Glu Glu Thr Glu Tyr Leu Thr Xaa Arg Ile Gln Xaa Gly Gly Thr
                245                 250                 255


Gln Val Val Glu Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Met Ala
            260                 265                 270


Tyr Ala Ala Ala Lys Phe Ala Asn Ala Cys Leu Arg Gly Leu Lys Gly
    275                 280                 285


Glu Ala Gly Ile Val Glu Cys Ala Phe Val Asp Ser Gln Val Thr Glu
    290                 295                 300


Leu Pro Phe Phe Ala Ala Lys Val Arg Leu Gly Arg Gly Gly Ala Glu
305                 310                 315                 320


Glu Ile Tyr Gln Leu Gly Pro Leu Asn Glu Tyr Glu Arg Ile Gly Leu
                325                 330                 335


Glu Lys Ala Lys Lys Glu Leu Ala Gly Ser Ile Gln Lys Gly Val Glu
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Phe Ile Lys Lys Lys Xaa Arg
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<210>   278

M80678527.ST25

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<212>   DNA
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tctctaatta ttattagtcc ttcgaaatgg aagcacatgc agctggtacc aatcagagga     120

ttgcaagaat ctctgctcat cttcagcctc caaatttcca ggaaggaggt gatgttgcaa     180

ttagcaaagc taactgcaga gcaaaaggtg gggcgccggg attcaaagta gcaatcttgg     240

gggctgctgg tggaattggt caatcccttt ctttgctgtt gaagatcaat ccattggttt     300

cagttcttca tctttatgat gttgtcaaca ctcctggtgt cactgctgat gttagtcaca     360

ttgacaccgg tgctgtggtt cgtggctttc tagggcaggc acaacttgag aatgcactta     420

caggcatgga cttggtcgtt atacctgctg gtgtgccgag gaaacctgga atgacaaggg     480

atgacttatt taagataaat gctggaattg tgaggactct tagcgaagga attgccaaga     540

gctgtcctaa tgcaattgtc aacttgatta gcaatccagt gaattccact gtgccaattg     600

ctgctgaggt tttcaagaaa gccggtacat atgatccaaa gcgactttta ngggtaacaa     660

ccctcgatgn tgt                                                        673


<210>   279
<211>   574
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M80678527.ST25

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<213>  Trifolium repens


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aggattgcaa gaatctctgc tcatcttcaa cctccaaatt tccaggaagg aggtgatgtt     120

gcaattagca aagctaactg cagagcaaaa ggtggggcgc cgggattcaa agtagcaatc     180

ttgggggctg ctggtggaat tggtcaatcc ctttctttgc tgttgaagat caatccattg     240

gtttcagttc ttcatcttta tgatgttgtc aacactcctg gtgtcactgc tgatgttagt     300

cacattgaca ccggtgctgt ggttcgtggc tttctagggc aggcacaact tgagaatgca     360

cttacaggca tggacttggt cgttatacct gctggtgtgc cgaggaaacc tggaatgaca     420

agggatgact tatttaagat aaatgctgga attgtgagga ctcttagcga aggaattgcc     480

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gcaattagca aagctaactg cagagcgaaa ggtggggcgc cgggattcaa agtagcaatc    180

ttgggggctg ctggtggaat tggtcaatcc ctttctttgc tgttgaagat caatccattg     240

gtttcagttc ttcatcttta tgatgttgtc aacactcctg gtgtcactgc tgatgttagt     300

cacattgata ccggtgctgt ggttcgtggc tttctagggc aggcacaact tgagaatgca     360

cttacaggca tggacttggt cgttatacct gctggtgtgc cgaggaaacc tggaatgaca     420

agggatgact tatttaagat aaatgctgga attgtgagga ctctttctga aggaattgtc     480

aagagctgtc ctaatgcaat tgtcaacttg attagcaatc cagtgaattc cactgtgcca     540

att                                                                 543


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M80678527.ST25

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ctcatcttcg cctccaaatt tccaggaagg aagtgatgtc gcaattagca aagctaactg       120

cagagcaaaa ggtggggcgc cgggattcaa agtagcaatc ttggggctg ctggtggaat        180

tggtcaatcc ctttctttgc tgttgaagat caatccattg gtttcggttc ttcatcttta       240

tgatgttgtc aacactcctg gtgtcactgc tgatgttagt cacattgaca ccggtgctgt       300

ggttcgtggc tttctagggc aggcacaact tgagaatgca cttacaggca tggacttggc       360

cgttatacct gctggtgtgc cgaggaaacc tggaatgaca agggatgact tatttaagat       420

aaatgctgga attgtgagga ctctttctga aggaattgtc aagagctgtc ctaatgcaat       480

tgtcaacttg attagcaatc cagtgaattc cactgtgcca attgctgctg aggtcttcaa       540

gaaagccggt acatatgatc caaaacgact tttaggagtt acaaccctcg atg             593
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<210>  282
<211>  693
<212>  DNA
<213>  Trifolium repens
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<223>  n is a, c, g, or t
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<223>  n is a, c, g, or t
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<223>  n is a, c, g, or t
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>
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<222> (674)..(674)
<223> n is a, c, g, or t

<220>
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<222> (680)..(680)
<223> n is a, c, g, or t

<400>  282
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ttcaacctcc aaatttccag gaaggaggtg atgttgcaat tagcaaagct aactgcagag   120

caaaaggtgg ggcgccggga ttcaaagtag caatcttggg ggctgctggt ggaattggtc   180

aatccctttc tttgctgttg aagatcaatc cattggtttc ggttcttcat ctttatgatg   240

ttgtcaacac tcctggtgtc actgctgatg ttagtcacat tgacaccggt gctgtggttc   300

gtggctttct agggcaggca caacttgaga atgcacttac aggcatggac ttggtcgtta   360

tacctgctgg tgtgccgagg aaacctggaa tgacaaggga tgacttattt aagataaatg   420

ctggaattgt gaggactctt tctgaaggaa ttgtcaagag ctgtcctaat gcaattgtca   480

acttgattag caatccagtg aattccactg tgccaattgc tggtgaggtc ttcaagaaag   540

ccggnacata tgatccaaaa cnactttтaa gggttacaac cctngatgtt gngagggcaa   600

atacttttgt ggcanaagnc ttggngttga ncccaaanag ggtnatnttc cantggtagg   660

agggcccccn ggantacaan attacccttt ttt                                693
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<210>  283
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<211>  555
<212>  DNA
<213>  Trifolium repens


<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

<400>  283
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tccaggaagg aggtgatgtt gcaattagca aagctaactg cagagcaaaa ggtggggcgc     120

cgggattcaa agtagcaatc ttgggggctg ctggtggaat tggtcaatcc ctttctttgc     180

tgttgaagat caatccattg gtttcagttc ttcatcttta tgatgttgtc aacactcctg     240

gtgtcactgc tgatgttagt cacattgaca ccggtgctgt ggttcgtggc tttctagggc     300

aggcacaact tgagaatgca cttacaggca tggacttggt cgttatacct gctggtgtgc     360

cgaggaaacc tggaatgaca agggatgact tatttaagat aaatgctgga attgtgagga     420

ctcttagcga aggaattgcc aagagctgtc ctaatgcaat tgtcaacttg attagcaatc     480

cagtgaattc cactgtgcca attgctgctg aggttttcaa gaaagccggt acatatgatc     540

caaagcgact tttag                                                      555


<210>  284
<211>  473
<212>  DNA
<213>  Trifolium repens


<220>
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<222>  (42)..(42)
<223>  n is a, c, g, or t

<220>
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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t
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M80678527.ST25

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c, g, or t

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<223>  n is a, c,. g, or t

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<223>  n is a, c, g, or t

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<222>  (437)..(437)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (446)..(446)
<223>  n is a, c, g, or t

<400>  284
gtttcaactt gaaaatgcac ttacaggcat ggacttggtc gntatacctg ctggtgtgcc     60

gaggaaacct ggaatgacaa gggatgactt atttaagata aatgctggaa ttgtgaggac     120

tcttagcgaa ggaattgcca agagctgtcc taatgcaatt gtcaacttga ttagcaatcc     180

agtgaattcc actgtgccaa ttgctgctga ggttttcaag aaagccggta catatgattc     240

aaagcgactt ttaggggtaa caaccctcga tgttgtgagg gcaaatacct ttgtggcaga     300

agtacttggt gttgatccaa gagaggttga tgttccagng gtaggatggc acgcangagt     360

acaatattac ctcttttgtc acaggttaag cctnccagta ncttaccgna gaanaaaccg     420

aatacctgac anancgnatt caaaanggcg gaacacaagt cgttgaggca aag            473

<210>  285
<211>  598
<212>  DNA
<213>  Trifolium repens

<220>
<221>  misc_feature
<222>  (266)..(266)
<223>  n is a, c, g, or t
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M80678527.ST25

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<220>
<221> misc_feature
<222> (560)..(560)
<223> n is a, c, g, or t

<400> 285
tatgatccac gcgacttta ggggtacaac cctcgatgtt gtgagggcaa ataccttgt      60

ggcagaagta cttggtgttg atccaagaga ggttgatgtt ccagtggtag gagggcacgc     120

aggagtcaca atattacctc ttttgtcaca ggttaagcct cccagtagct tcactgcaga     180

agaaaccgaa tacctgacaa atcgcattca aaatggtgga acagaagttg ttgaggcaaa     240

ggctggggct ggttcggcaa cactantaat ggcatatgca gctgccaagt ttgctaacgc     300

atgcctccgt ggcttgaaag gagaagccgg gatagtggag tgtgcttttg ttgattctca     360

ggttacggaa cttcctttct ttgcagccaa ggttcgtctt ggtcgcggtg gagcagaaga    ·420

gatataccaa cttggtcccc ttaatgagta tgagaggatt gggttggaaa aagcgaagaa     480

tgagttagcg ggaagcatcc agaagggagt agaattcatc agaaaataag tcagataagg     540

aaaaattagt tttgtattgn ctctttctat atctataaag aacttgtgta ataattcc      598
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<210> 286
<211> 306
<212> DNA
<213>. Trifolium repens
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<222> (40)..(40)
<223> n is a, c, g, or t
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<220>
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<222> (42)..(42)
<223> n is a, c, g, or t
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<220>
<221> ·misc_feature
<222> (298)..(298)
<223> n is a, c, g, or t
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<220>
<221> misc_feature
<222> (304)..(304)
<223> n is a, c, g, or t

<400> 286
gttgttgagg caaaggctgg ggctggttcg gcaacactan tnatggccta tgcagctgcc      60

aagtttgcta acgcatgcct ccgtggcttg aaaggagaag ccgggatagt ggagtgtgct     120

tttgttgatt ctcaggttac ggaacttcct ttctttgcag ccaaggttcg tcttggtcgc     180

ggtggagcag aagagatata tcaacttggt ccccttaatg agtatgagag gattggatta     240

gaaaaagcga agaaagagtt agcaggaagc atccagaagg gagtagaatt catcacanaa     300

aaanaa                                                                306
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M80678527.ST25

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<210>    287
<211>    299
<212>    DNA
<213>    Trifolium repens


<220>
<221>    misc_feature
<222>    (10)..(10)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (31)..(31)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (36)..(36)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (38)..(38)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (299)..(299)
<223>    n is a, c, g, or t

<400>    287
ttgttgaggn aaaggctggg gctggttcgg nacctntnat ggcctatgca gctgccagtt        60

tgctaacgca tgcctccgtg gcttgaaagg agaagccggg atagtggagt gtgcttttgt       120

tgattctcag gttacggaac ttcctttctt tgcagccaag gttcgtcttg gtcgcggtgg       180

agcagaagag atatatcaac ttggtcccct taatgagtat gagaggattg gattagaaaa       240

agcgaagaaa gagttagcag gaagcatcca gaagggagta gaattcatca aaaaaaaan        299


<210>    288
<211>    866
<212>    DNA
<213>    Trifolium repens


<220>
<221>    misc_feature
<222>    (2)..(3)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (7)..(7)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (14)..(14)
<223>    n is a, c, g, or t

<220>
<221>    misc_feature
<222>    (38)..(38)
<223>    n is a, c, g, or t
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<220>
<221> misc_feature
<222> (280)..(280)
<223> n is a, c, g, or t

<400> 288

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gnntacngct atcnaccctt ctttcttata caataatnat agataaattc atctgctaaa    60

ttatggagcc aaattcagat gcaaatcaac gaatcgcaag aatctccggc cacctaaatc   120

ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg   180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc   240

aacctctttc aatgttgatg aagatgaatc ctttggtttn agttcttcat ctttatgatg   300

ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct gctgttgttc   360

gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat ttggtaatca   420

ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc aatataaatg   480

ccgggatcgt aaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag gcgattgtca   540

acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt ttcaaaagag   600

ccggtactta tgatcccaag agactttgg gagtgacaat gcttgatgtg gttcgggcca   660

atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc ccagttgtcg   720

gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca cattcctctt   780

tcacgacaaa ggaaattgag tacttgacag atcgcataca aaacggtgga actgaagttg   840

ttgaggccaa agctggagct ggctct                                        866
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<210> 289
<211> 268
<212> PRT
<213> Trifolium repens

<220>
<221> misc_feature
<222> (73)..(73)
<223> Xaa can be any naturally occurring amino acid

<400> 289

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Met Glu Pro Asn Ser Asp Ala Asn Gln Arg Ile Ala Arg Ile Ser Gly
1               5                   10                  15


His Leu Asn Pro Pro Asn Phe Lys Met Asn Glu His Gly Asp Ser Ser
            20                  25                  30


Leu Thr Ser Phe His Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys
        35                  40                  45


Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Met
    50                  55                  60


Leu Met Lys Met Asn Pro Leu Val Xaa Val Leu His Leu Tyr Asp Val
```

M80678527.ST25
65   70   75   80

Val Asn Thr Pro Gly Val Thr Ser Asp Ile Ser His Met Asp Thr Ala
                85   90   95

Ala Val Val Arg Gly Phe Leu Gly Gln Asn Gln Leu Glu Asp Ala Leu
                100   105   110

Thr Gly Met Asp Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro
        115   120   125

Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys
    130   135   140

Thr Leu Cys Glu Ala Ile Ala Lys Arg Cys Pro Lys Ala Ile Val Asn
145   150   155   160

Val Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val
                165   170   175

Phe Lys Arg Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr
                180   185   190

Met Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly
        195   200   205

Leu Asp Pro Arg Asp Val Asp Val Pro Val Val Gly Gly His Ala Gly
        210   215   220

Ile Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro His Ser Ser Phe
225   230   235   240

Thr Thr Lys Glu Ile Glu Tyr Leu Thr Asp Arg Ile Gln Asn Gly Gly
                245   250   255

Thr Glu Val Val Glu Ala Lys Ala Gly Ala Gly Ser
        260   265

<210> 290
<211> 572
<212> DNA
<213> Trifolium repens

<220>
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<222> (2)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (7)..(7)
<223> n is a, c, g, or t

<220>

M80678527.ST25

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<222>  (14)..(14)
<223>  n is a, c, g, or t

<220>
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<222>  (38)..(38)
<223>  n is a, c, g, or t

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gnntacngct atcnacccтt ctttcttata caataatnat agataaattc atctgctaaa     60

ttatggagcc aaattcagat gcaaatcaac gaatcgcaag aatctccggc cacctaaatc    120

ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg    180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc  .  240

aacctctttc aatgttgatg aagatgaatc ccttggttta gttcttcatc tttatgatgt    300

tgttaatact cctggtgtta cttctgatat tagtcacatg gatactggtg ctgttgttcg    360

aggattتttg gggcaaaatc agcttgagga tgcacttaca ggtatggatt tggtaatcat    420

tcctgctggt gttccccgta aacctggaat gacaagagat gatctcttca atataaatgc    480

cgggatcgtt aaaacactct gtgaagcaat tgcgaagcga tgtcctaagg cgattgtcaa    540

cgtgattagt aatccggtta actccactgt cc                                  572


<210>  291
<211>  576
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (4)..(4)
<223>  n is a, c, g, or t

<220>
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<222>  (12)..(12)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (22)..(22)
<223>  n is a, c, g, or t

<400>  291
gtgncatagg tnaccctctt tnatgttgat gaagatgaat cctatggttt agttcttcat     60

ctttatgatg ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct    120

gctgttgttc gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat    180

ttggtaatca ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc    240

aatataaatg ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag    300

gcgattgtca acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt    360

ttcaaaagag ccggtactta tgatcccaag agacttttgg gagtgacaat gcttgatgtg    420

gttcgggcca atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc    480
```

M80678527.ST25

```
ccagttgtcg gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca    540

cattcctctt tcacgacaaa ggaaattgag tacttg                             576
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<210>   292
<211>   592
<212>   DNA
<213>   Trifolium repens
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<222>   (9)..(10)
<223>   n is a, c, g, or t
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<220>
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<222>   (19)..(19)
<223>   n is a, c, g, or t
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<400>   292
tttggtttnn gttcttatnc tttatgatgt tgtaatactc ctggtgtact tctgatatta    60

gtatatggat actgctgctg ttgttcgagg gtttttgggg caaaatcagc ttgaggatgc    120

acttacaggt atggatttgg taatcattcc tgccggtgtt ccccgtaaac ctggaatgac    180

aagagatgat ctcttcaata taaatgccgg gatcgttaaa acactctgtg aagcaattgc    240

aaagcgatgt cctaaggcgg ttgtcaacgt gattagtaat ccggttaact ccactgtccc    300

cattgcggct gaagttttca aaagagccgg tacttatgat cccaagagac ttttgggagt    360

gacaatgctt gatgtggttc gggccaatac gtttgtggct gaagttcttg gtcttgatcc    420

aagggatgtg gatgtcccag ttgtcggagg acatgccgga atcaccattt tacctctgct    480

ttctcaggtt aaaccacatt cctctttcac gacaaaggaa attgagtact tgacagatcg    540

catacaaaac ggtggaactg aagttgttga ggccaaagct ggagctggct ct         592
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<210>   293
<211>   599
<212>   DNA
<213>   Trifolium repens
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<223>   n is a, c, g, or t
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<220>
<221>   misc_feature
<222>   (210)..(210)
<223>   n is a, c, g, or t
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<220>
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<222>   (271)..(271)
<223>   n is a, c, g, or t
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```
<400>   293
gtaggcagca tctaacagca caatgaacat ggaaatgttt gctttggaaa ttatggacaa    60
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                                    M80678527.ST25
tacggtcctt aaaaaatctg ttcttgtttt attttgtact tttttgtttt ggaagatcgt      120

tagatacatg tgtggtcttc tcaaagttga taaggaacca gtcactgtat tggtcactgg      180

tgctgcagga caaattggnt atgctcttgn tccaatgatt gcaagaggga tgatgctagg      240

cccaaatcaa cctggaattc ttcatatgct ngatattgaa ccaggattag aggcccttaa      300

aggggtgaag atggaactga ttgatggtgc tttcccactt cttagaggtg ttgttgctac      360

tacggatgtt gttgaagcat gcaaggatgt taacattgct gttatgcttg gtggatcccc      420

aaggaaggaa ggaatggaaa gaaaagatgt aatgtctaag aatgtttcaa tttacaaggc      480

tcaagcttca gctttggagg agcatgctgc tgcagattgt aaagtgctag tggtagccaa      540

tccagcaaac acaaatgctc taatattgaa agaatttgct ccatcaatcc ctgagaaaa       599
```

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<210>  294
<211>  157
<212>  PRT
<213>  Trifolium repens


<220>
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<222>  (24)..(24)
<223>  Xaa can be any naturally occurring amino acid

<220>
<221>  misc_feature
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<223>  Xaa can be any naturally occurring amino acid

<220>
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<223>  Xaa can be any naturally occurring amino acid

<400>  294

Met Cys Gly Leu Leu Lys Val Asp Lys Glu Pro Val Thr Val Leu Val
1               5                  10                  15


Thr Gly Ala Ala Gly Gln Ile Xaa Tyr Ala Leu Xaa Pro Met Ile Ala
                20                  25                  30


Arg Gly Met Met Leu Gly Pro Asn Gln Pro Gly Ile Leu His Met Xaa
                35                  40                  45


Asp Ile Glu Pro Gly Leu Glu Ala Leu Lys Gly Val Lys Met Glu Leu
         50                  55                  60


Ile Asp Gly Ala Phe Pro Leu Leu Arg Gly Val Val Ala Thr Thr Asp
65                  70                  75                  80


Val Val Glu Ala Cys Lys Asp Val Asn Ile Ala Val Met Leu Gly Gly
                85                  90                  95


Ser Pro Arg Lys Glu Gly Met Glu Arg Lys Asp Val Met Ser Lys Asn
                100                 105                 110
```

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Val Ser Ile Tyr Lys Ala Gln Ala Ser Ala Leu Glu Glu His Ala Ala
        115   120   125

Ala Asp Cys Lys Val Leu Val Val Ala Asn Pro Ala Asn Thr Asn Ala
        130   135   140

Leu Ile Leu Lys Glu Phe Ala Pro Ser Ile Pro Glu Lys
145   150   155

<210>   295
<211>   276
<212>   DNA
<213>   Trifolium repens

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<222>   (197)..(197)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (208)..(208)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (210)..(210)
<223>   n is a, c, g, or t

<220>
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<222>   (223)..(223)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (237)..(237)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (239)..(239)
<223>   n is a, c, g, or t

<220>
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<222>   (247)..(247)
<223>   n is a, c, g, or t

<220>
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<222>   (254)..(254)
<223>   n is a, c, g, or t

<220>
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<222>   (269)..(269)

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<223> n is a, c, g, or t

<220>
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<222> (271)..(271)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (273)..(273)
<223> n is a, c, g, or t

<400> 295
gtaggcatca taacagcaca atgaacatgg aaatgtttgc tttggaaatt atggacaata   60

cggtccttaa aaaatctgtt cttgtttttat tttgtacttt tttgtttttgg aagatcgtta   120

gatacatgtg tggtcttctc aaagttgata aggaaccagt cactgtattg gtcactggtg   180

ctgcaggaca aattggntat gctcttgntn caatgattgc nanagggatg atgctangnc   . 240

caaatcnacc tggnattgtt gatatgctng ntnttg   .276

<210> 296
<211> 594
<212> DNA
<213> Trifolium repens

<220>
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<222> (2)..(3)
<223> . n is a, c, g, or t

<400> 296
gnnggatcta acagacaatg aacatggaaa tgtttgcttt ggaaattatg gacaatacgg   60

tccttaaaaa atctgttctt gttttatttt gtactttttt gttttggaag atcgttagat   .120

acatgtgtgg tcttctcaaa gttgataagg aaccagtcac tgtattggtc actggtgctg   180

caggacaaat tggttatgct cttgttccaa tgattgcaag agggatgatg ctaggcccaa   240

atcaacctgt aattcttcat atgcttgata ttgaaccagg attagaggcc cttaaagggg   · 300

tgaagatgga actgattgat ggtgctttcc cacttcttag aggtgttgtt gctactacgg   360 ·

atgttgttga agcatgcaag gatgttaaca ttgctgttat gcttggtgga tccccaagga   420

aggaaggaat ggaaagaaaa gatgtaatgt ctaagaatgt ttcaatttac aaggctcaag   480

cttcagcttt ggaggagcat gctgctgcag attgtaaagt gctagtggta gccaatccag   540

caaacacaaa tgctctaata ttgaaagaat ttgctccatc aatccctgag aaaa   594

<210> 297
<211> 866
<212> DNA
<213> Trifolium repens

<220>
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<222> (2)..(3)
<223> n is a, c, g, or t

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<223> n is a, c, g, or t

<220>
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<222> (14)..(14)
<223> n is a, c, g, or t

<220>
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<222> (38)..(38)
<223> n is a, c, g, or t

<220>
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<223> n is a, c, g, or t

<400> 297
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ttatggagcc aaattcagat gcaaatcaac gaatcgcaag aatctccggc cacctaaatc     120

ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg     180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc     240

aacctctttc aatgttgatg aagatgaatc ctttggtttn agttcttcat ctttatgatg     300

ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct gctgttgttc     360

gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat ttggtaatca     420

ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc aatataaatg     480

ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag gcgattgtca     540

acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt ttcaaaagag     600

ccggtactta tgatcccaag agactttttgg gagtgacaat gcttgatgtg gttcgggcca    660

atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc ccagttgtcg     720

gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca cattcctctt     780

tcacgacaaa ggaaattgag tacttgacag atcgcataca aaacggtgga actgaagttg     840

ttgaggccaa agctggagct ggctct                                          866


<210> 298
<211> 268
<212> PRT
<213> Trifolium repens

<220>
<221> misc_feature
<222> (73)..(73)
<223> Xaa can be any naturally occurring amino acid

<400> 298
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Met Glu Pro Asn Ser Asp Ala Asn Gln Arg Ile Ala Arg Ile Ser Gly
1   5   10   15

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```
His Leu Asn Pro Pro Asn Phe Lys Met Asn Glu His Gly Asp Ser Ser
            20              25              30

Leu Thr Ser Phe His Cys Arg Ala Lys Gly Gly Ala Pro Gly Phe Lys
            35              40              45

Val Ala Ile Leu Gly Ala Ala Gly Gly Ile Gly Gln Pro Leu Ser Met
    50              55              60

Leu Met Lys Met Asn Pro Leu Val Xaa Val Leu His Leu Tyr Asp Val
65              70              75              80

Val Asn Thr Pro Gly Val Thr Ser Asp Ile Ser His Met Asp Thr Ala
                85              90              95

Ala Val Val Arg Gly Phe Leu Gly Gln Asn Gln Leu Glu Asp Ala Leu
            100             105             110

Thr Gly Met Asp Leu Val Ile Ile Pro Ala Gly Val Pro Arg Lys Pro
        115             120             125

Gly Met Thr Arg Asp Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Lys
    130             135             140

Thr Leu Cys Glu Ala Ile Ala Lys Arg Cys Pro Lys Ala Ile Val Asn
145             150             155             160

Val Ile Ser Asn Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val
                165             170             175

Phe Lys Arg Ala Gly Thr Tyr Asp Pro Lys Arg Leu Leu Gly Val Thr
            180             185             190

Met Leu Asp Val Val Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly
        195             200             205

Leu Asp Pro Arg Asp Val Asp Val Pro Val Val Gly Gly His Ala Gly
    210             215             220

Ile Thr Ile Leu Pro Leu Leu Ser Gln Val Lys Pro His Ser Ser Phe
225             230             235             240

Thr Thr Lys Glu Ile Glu Tyr Leu Thr Asp Arg Ile Gln Asn Gly Gly
            245             250             255

Thr Glu Val Val Glu Ala Lys Ala Gly Ala Gly Ser
            260             265
```

<210> 299
<211> 572
<212> DNA

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<213> Trifolium repens

<220>
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<222> (2)..(3)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (7)..(7)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (14)..(14)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (38)..(38)
<223> n is a, c, g, or t

<400> 299
gnntacngct atcnaccctt ctttcttata caataatnat agataaattc atctgctaaa   60

ttatggagcc aaattcagat gcaaatcaac gaatcgcaag aatctccggc cacctaaatc   120

ctcccaattt caagatgaat gaacatggtg attcttcttt gacaagtttc cattgccgtg   180

caaaaggtgg agcacctgga ttcaaagttg caattttagg tgctgctggt ggcataggtc   240

aacctctttc aatgttgatg aagatgaatc ccttggttta gttcttcatc tttatgatgt   300

tgttaatact cctggtgtta cttctgatat tagtcacatg gatactggtg ctgttgttcg   360

aggatttttg gggcaaaatc agcttgagga tgcacttaca ggtatggatt tggtaatcat   420

tcctgctggt gttccccgta aacctggaat gacaagagat gatctcttca atataaatgc   480

cgggatcgtt aaaacactct gtgaagcaat tgcgaagcga tgtcctaagg cgattgtcaa   540

cgtgattagt aatccggtta actccactgt cc   572

<210> 300
<211> 576
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (4)..(4)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (12)..(12)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (22)..(22)
<223> n is a, c, g, or t

<400> 300
gtgncatagg tnaccctctt tnatgttgat gaagatgaat cctatggttt agttcttcat   60

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ctttatgatg ttgttaatac tcctggtgtt acttctgata ttagtcatat ggatactgct    120

gctgttgttc gagggttttt ggggcaaaat cagcttgagg atgcacttac aggtatggat    180

ttggtaatca ttcctgccgg tgttccccgt aaacctggaa tgacaagaga tgatctcttc    240

aatataaatg ccgggatcgt taaaacactc tgtgaagcaa ttgcaaagcg atgtcctaag    300

gcgattgtca acgtgattag taatccggtt aactccactg tccccattgc ggctgaagtt    360

ttcaaaagag ccggtactta tgatcccaag agacttttgg gagtgacaat gcttgatgtg    420

gttcgggcca atacgtttgt ggctgaagtt cttggtcttg atccaaggga tgtggatgtc    480

ccagttgtcg gaggacatgc cggaatcacc attttacctc tgctttctca ggttaaacca    540.

cattcctctt tcacgacaaa ggaaattgag tacttg                              576
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<210>   301
<211>.  592
<212>   DNA
<213>   Trifolium repens


<220>     .
<221>   misc_feature
<222>   (9)..(10)
<223>   n is. a, c,. g, or t

<220>
<221>   misc_feature
<222>   (19)..(19)
<223>   n is a, c, g, or t

<400>   301
tttggtttnn gttcttatnc tttatgatgt tgtaatactc ctggtgtact tctgatatta    60

gtatatggat actgctgctg ttgttcgagg gtttttgggg caaaatcagc ttgaggatgc .  120 .

acttacaggt atggatttgg taatcattcc tgccggtgtt ccccgtaaac ctggaatgac    180

aagagatgat ctcttcaata taaatgccgg gatcgttaaa acactctgtg aagcaattgc    240

aaagcgatgt cctaaggcgg ttgtcaacgt gattagtaat ccggttaact ccactgtccc    300

cattgcggct gaagttttca aaagagccgg tacttatgat cccaagagac ttttgggagt    360

gacaatgctt gatgtggttc gggccaatac gtttgtggct gaagttcttg gtcttgatcc    420

aagggatgtg gatgtcccag ttgtcggagg acatgccgga atcaccattt tacctctgct    480

ttctcaggtt aaaccacatt cctctttcac gacaaaggaa attgagtact tgacagatcg    540

catacaaaac ggtggaactg aagttgttga ggccaaagct ggagctggct ct           592
```

```
<210>   302
<211>   647
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (2)..(2)
<223>   n is a, c, g, or t
```

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<220>
<221> misc_feature
<222> (14)..(14)
<223> n is a, c, g, or t

<400> 302
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gnaatcctct ttgnctcccc taccctcctt tttttttcctt ccttcttaca ccttctctta      60

tcaactttcc acctctgaac aaaacttcaa tcttttctca ttttcttata ccctttttaca     120

aacttcttca taaagtgtta ggtttttttt tattactctt ttcaagaacc acaaaaacag     180

tgtttcttga attctttgga attttttttt tcctgcaacc atggccttgg cacacttaaa     240

caaccccact tgctcaaaaa ctcaacttca ctcatcacaa ctctcatttc tctctaggac     300

tctccctagg caatatcact gtacttttgc accacttcac agaactcaac atggcagaat     360

tacttgttct gttgcaccaa atcaagtgca ggctccagct gtacaatcac aggatcccaa     420

gaataagcct gattgctatg gtgtcttctg ccttacctat gatttgaagg ctgaagagga     480

gacaaaatcc tggaagaaat taatcaacat tgcagtctca ggtgctgctg gaatgatttc     540

caatcatcta cttttcaagc ttgcatctgg tgaagttttt ggcccaaatc aacctattgc     600

gctgaaatta ttaggatcag aaaggtcctt ccaagctctt gaaggtg                   647
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<210> 303
<211> 142
<212> PRT
<213> Trifolium repens

<400> 303

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Met Ala Leu Ala His Leu Asn Asn Pro Thr Cys Ser Lys Thr Gln Leu
1               5                   10                  15

His Ser Ser Gln Leu Ser Phe Leu Ser Arg Thr Leu Pro Arg Gln Tyr
            20                  25                  30

His Cys Thr Phe Ala Pro Leu His Arg Thr Gln His Gly Arg Ile Thr
            35                  40                  45

Cys Ser Val Ala Pro Asn Gln Val Gln Ala Pro Ala Val Gln Ser Gln
        50                  55                  60

Asp Pro Lys Asn Lys Pro Asp Cys Tyr Gly Val Phe Cys Leu Thr Tyr
65                  70                  75                  80

Asp Leu Lys Ala Glu Glu Glu Thr Lys Ser Trp Lys Lys Leu Ile Asn
                85                  90                  95

Ile Ala Val Ser Gly Ala Ala Gly Met Ile Ser Asn His Leu Leu Phe
                100                 105                 110

Lys Leu Ala Ser Gly Glu Val Phe Gly Pro Asn Gln Pro Ile Ala Leu
            115                 120                 125
```

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```
Lys Leu Leu Gly Ser Glu Arg Ser Phe Gln Ala Leu Glu Gly
    130             135             140
```

```
<210>   304
<211>   602
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (2)..(2)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (14)..(14)
<223>   n is a, c, g, or t

<400>   304
gnaatcctct ttgnctcccc taccctcctt tttttttcctt ccttcttaca cttctcttct      60

caactttcca cctctgaaca aaacttctat cttttctcat tttcttatac ccttttagaa     120

acttcttcat aaagtgttat tttttttttat tactcttttc aagaatcaca aaaacagtgt     180

ttcttgaatt ctttgtaatt tttttttttcc tgcaaccatg gccttggcac agttaaacaa     240

tcccacttgc tcaaaaactc aacttcactc atcacaactc tcatttttgt ctaggactct     300

ccctaggcaa tatcactgta cttttgcacc acttcacaga actcaacatg gcagaattac     360

ttgttctgtt gcaccaaatc aagtgcaggc tccagctgta caatcacagg atcccaagaa     420

taagcctgat tgctatggtg tcttctgcct tacctatgat ttgaaggctg aagaggagac     480

aaaatcctgg aagaaattaa tcaacattgc agtctcaggt gctgctggaa tgatttccaa     540

tcatctactt ttcaagcttg catctggtga agttttggt ccaaatcaac ctattgcgct      600

ga                                                                    602


<210>   305
<211>   599
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (27)..(27)
<223>   n is a, c, g, or t

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tatacccttt tacaaacttc ttcataaagt gttgggtttt tttttattac tcttttcaag     120

aaccacaaaa acagtgtttc ttgaattctt ggaattttttt tttcctgcaa ccatggcttt     180

ggcacactta acaaccccca cttgctcaaa aactcaactt cattcatcac agctctcatt     240

tctctctagg actctcccta ggcaatatca ctgtactttt gcaccacttc acagaactca     300

acatggcaga attacttgtt ctgttgcacc aaatcaagtg caggctccag ctgtacaatc     360
```

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```
acaggatccc aagaataagc ctgattgcta tggtgtcttc tgccttacct atgatttgaa      420

ggctgaagag gagacaaaat cctggaagaa attaatcaac attgcagtct caggtgctgc      480

tggaatgatt tccaatcatc tacttttcaa gcttgcatct ggtgaagttt ttggcccaaa      540

tcaacctatt gcgctgaaat tattaggatc agaaaggtcc ttccaagctc ttgaaggtg       599
```

```
<210>  306
<211>  569
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (8)..(8)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (12)..(12)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (14)..(14)
<223>  n is a, c, g, or t

<400>  306
gcaaagcnct cncngacctg gtgtggagcg agcagctttg ctagacataa atgggcagat      60

ttttgcggag cagggaaaag ctctaaatgc agtcgcatct cgcaatgtca aagttatagt      120

tgtgggaaac ccttgcaata caaatgcatt aatatgcttg aagaatgctc caaatattcc      180

tgcaaaaaat tttcatgctt taacccgttt agatgagaac agagcaaaat gtcagctagc      240

cctcaaggca ggtgtcttct acgataaagt gtcgaatatg acgatatggg gaaaccactc      300

aactactcag gtccccgatt tcttaaatgc cagaatcgat ggtttgcctg tcaaagaagt      360

gattaaggat caaaagtggt tagaggaaga gttcaccgaa aaagttcaaa agagaggtgg      420

cgtgcttatt caaaagtggg gaagatcgtc tgctgcatca acttctgtgt cgatagttga      480

tgccatacga tctttgatca ctcctactcc ggagggtgat tggttttcta ctggtgtgta      540

tacagctgga aatccttatg gaatagctg                                       569
```

```
<210>  307
<211>  189
<212>  PRT
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (3)..(5)
<223>  Xaa can be any naturally occurring amino acid

<400>  307

Gln Ser Xaa Xaa Xaa Pro Gly Val Glu Arg Ala Ala Leu Leu Asp Ile
1               5                   10                  15
```

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```
Asn Gly Gln Ile Phe Ala Glu Gln Gly Lys Ala Leu Asn Ala Val Ala
            20              25              30

Ser Arg Asn Val Lys Val Ile Val Val Gly Asn Pro Cys Asn Thr Asn
        35          40              45

Ala Leu Ile Cys Leu Lys Asn Ala Pro Asn Ile Pro Ala Lys Asn Phe
.    50          55              60

His Ala Leu Thr Arg Leu Asp Glu Asn Arg Ala Lys Cys Gln Leu Ala
65       .          70       .       75              80

Leu Lys Ala Gly Val Phe Tyr Asp Lys Val Ser Asn Met Thr Ile Trp
.                85              90              95

Gly Asn His Ser Thr Thr Gln Val Pro Asp Phe Leu Asn Ala Arg Ile
            100             105             110

Asp Gly Leu Pro Val Lys Glu Val Ile Lys Asp Gln Lys Trp Leu Glu
.       115             120             .   125

Glu Glu Phe Thr Glu Lys Val Gln Lys Arg Gly Gly Val Leu Ile Gln
    130             135     .           140

Lys Trp Gly Arg Ser Ser Ala Ala Ser Thr Ser Val Ser Ile Val Asp
145             150             155             160

Ala Ile Arg Ser Leu Ile Thr Pro Thr Pro Glu Gly Asp Trp Phe Ser
            165             170             175

Thr Gly Val Tyr Thr Ala Gly Asn Pro Tyr Gly Ile Ala
            180             185
```

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<210> 308
<211> 558
<212> DNA
<213> Trifolium repens

<220>
<221> misc_feature
<222> (2)..(2)
<223> n is a, c, g, or t

<400> 308
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gctgcttgtg tcgtcgcctc cagctcctcc tcctccactg tgccaaccga attacaaacc   120

aaaaaaatgg cgacttgttt gcaaacacaa ctcctccaca caagaccttt tcagtttcgg   180

tcttcctcgt cgacaagacc aacttcccta agatgttccg ccgccacccc atccaccaaa   240

aaatcctaca aaatcactct tcttccgggt gatggcatag gtcctgaagt cgtttccgtc   300
```

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```
gctaaagacg ttcttctcct cactggatcc atccatggga ttaaacttga gtttcaagag    360

aagcttttgg gtggtgctgc tcttgatgct actggagttc ctttacctga tgatactctt    420

tctgttgcta agcaatctga tgctgttctt cttggtgcta ttgagggta taaatgggat      480

aaaaatgaga aacagctgaa gccagaaact ggattgcttc agctacgaga agggcttcaa    540

gtttttgcta atctcaga                                                 558
```

```
<210>   309
<211>   144
<212>   PRT
<213>   Trifolium repens

<400>   309
```

```
Met Ala Thr Cys Leu Gln Thr Gln Leu Leu His Thr Arg Pro Phe Gln
1               5                   10                  15


Phe Arg Ser Ser Ser Ser Thr Arg Pro Thr Ser Leu Arg Cys Ser Ala
            20                  25                  30


Ala Thr Pro Ser Thr Lys Lys Ser Tyr Lys Ile Thr Leu Leu Pro Gly
            35                  40                  45


Asp Gly Ile Gly Pro Glu Val Val Ser Val Ala Lys Asp Val Leu Leu
    50                  55                  60


Leu Thr Gly Ser Ile His Gly Ile Lys Leu Glu Phe Gln Glu Lys Leu
65                  70                  75                  80


Leu Gly Gly Ala Ala Leu Asp Ala Thr Gly Val Pro Leu Pro Asp Asp
                85                  90                  95


Thr Leu Ser Val Ala Lys Gln Ser Asp Ala Val Leu Leu Gly Ala Ile
                100                 105                 110


Gly Gly Tyr Lys Trp Asp Lys Asn Glu Lys Gln Leu Lys Pro Glu Thr
                115                 120                 125


Gly Leu Leu Gln Leu Arg Glu Gly Leu Gln Val Phe Ala Asn Leu Arg
    130                 135                 140
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<210>   310
<211>   713
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (2)..(3)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (9)..(9)
```

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<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (663)..(663)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (713)..(713)
<223>  n is a, c, g, or t

<400>  310
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atggcctcaa gtgcaagcga tgtccttgca gtagagcttt tacagaagga tgcacgtctt     120

acagtttgtg gagaattagg aagagcatgt ccgggtggaa cgcttcgggt ggttcctcta     180

tttgaaactg tgcaagacct gagaggagct ggtgcagtta tcagaaaact tttatcaatc     240

gattggtacc gccaacacat cattaagaac cataacggac accaagaggt tatggtcggt     300

tattctgatt ctggtaaaga tgccgggcgc tttactgctg cttgggaact ttacaaagct     360

caagaggatg tagtggctgc ttgcaataag tacgatacta aggttacttt gttccacggc     420

cgcggaggga gtattggacg tggcggaggc ccaacatatc tggctattca gtcccagcca     480

cctggctctg tgatgggaac ccttcggtca actgagcagg gagagatggt gcaggccgag     540

tttgggttgc cacagacagc agttagacaa cttgaaatat acacaacagc tgtgctactt     600

gctacacgtc gtccaccact cccacctcga gaagaaaaat ggcgtaatct aatggaagac     660

atntcaaaaa tcagttgtca gtcctaccgc agtgtagtct atgaaaatcc agn            713
```

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<210>  311
<211>  237
<212>  PRT
<213>  Trifolium repens


<220>
<221>  misc_feature
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<223>  Xaa can be any naturally occurring amino acid

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Tyr Val Ile Ser Met Ala Ser Ser Ala Ser Asp Val Leu Ala Val Glu
                20              25                  30
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Leu Leu Gln Lys Asp Ala Arg Leu Thr Val Cys Gly Glu Leu Gly Arg
        35   40   45

Ala Cys Pro Gly Gly Thr Leu Arg Val Val Pro Leu Phe Glu Thr Val
    50   55   60

Gln Asp Leu Arg Gly Ala Gly Ala Val Ile Arg Lys Leu Leu Ser Ile
65   70   75   80

Asp Trp Tyr Arg Gln His Ile Ile Lys Asn His Asn Gly His Gln Glu
            85   90   95

Val Met Val Gly Tyr Ser Asp Ser Gly Lys Asp Ala Gly Arg Phe Thr
            100   105   110

Ala Ala Trp Glu Leu Tyr Lys Ala Gln Glu Asp Val Val Ala Ala Cys
        115   120   125

Asn Lys Tyr Asp Thr Lys Val Thr Leu Phe His Gly Arg Gly Gly Ser
    130   135   140

Ile Gly Arg Gly Gly Gly Pro Thr Tyr Leu Ala Ile Gln Ser Gln Pro
145   150   155   160

Pro Gly Ser Val Met Gly Thr Leu Arg Ser Thr Glu Gln Gly Glu Met
            165   170   175

Val Gln Ala Glu Phe Gly Leu Pro Gln Thr Ala Val Arg Gln Leu Glu
        180   185   190

Ile Tyr Thr Thr Ala Val Leu Leu Ala Thr Arg Arg Pro Pro Leu Pro
        195   200   205

Pro Arg Glu Glu Lys Trp Arg Asn Leu Met Glu Asp Xaa Ser Lys Ile
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Ser Cys Gln Ser Tyr Arg Ser Val Val Tyr Glu Asn Pro
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atggcctcaa gtgcaagcga tgtccttgca gtagagcttt tcagaaggat gcacgacttg     120

ctgctattgg agagttcgga agagcatgtc ctggtggaac gttgcgggtt gtccctctat     180

ttgaaactgt gaaggaccta agaggagctg gttcagttat ccggaaactt ttatcgatag     240

actggtaccg tgaacacatc attaagaacc acaatggaca tcaagaggtt atggttggat     300

attctgattc gggtaaagat gctggccgct tcactgctgc ttgggaactt tacaaagctc     360

aggaggatgt tgtagctgct tgcaatgatt atggtattaa agttacactg tttcatggcc     420

gtggaggcag tattggtcga ggtggtggcc ctacatatct ggctattcag tcccaaccac     480

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ttgggttacc acagatagct gttagacaac ttgann                               576


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ggtggaacgc ttcgggtggt tcctctattt gaaactgtgc aagacctgag aggagctggt     120

gcagttatca gaaaactttt atcaatcgat tggtaccgcc aacacatcat taagaaccat     180

aacggacacc aagaggttat ggtcggttat tctgattctg gtaaagatgc cgggcgcttt     240

actgctgctt gggaacttta caaagctcaa gaggatgtag tggctgcttg caataagtac     300

gatactaagg ttactttgtt ccacggccgc ggagggagta ttggacgtgg cggaggccca     360

acatatctgg ctattcagtc ccagccacct ggctctgtga tgggaaccct tcggtcaact     420

gagcagggag agatggtgca ggccgagttt gggttgccac agacagcagt tagacaactt     480

gaaatataca caacagctgt gctacttgct acacgtcgtc caccactccc acctcgagaa     540

gaaaaatggc gtaatctaat ggaagacatn                                      570


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gtggaacgct tcgggtggtt cctctatttg aaactgtgca agacctgaga ggagctggtg     120

cagttatcag aaaactttta tcaatcgatt ggtaccgcca acacatcatt aagaaccata     180

acggacacca agaggttatg gtcggttatt ctgattctgg taaagatgcc gggcgcttta     240

ctgctgcttg ggaactttac aaagctcaag aggatgtagt ggctgcttgc aataagtacg     300

atactaaggt tactttgttc cacggccgcg gagggagtat tggacgtggc ggaggcccaa     360

catatctggc tattcagtcc cagccacctg gctctgtgat gggaaccctt cggtcaactg     420

agcagggaga gatggtgcag gccgagtttg ggttgccaca gacagcagtt agacaacttg     480

aaatatacac aacagctgtg ctacttgcta cacgtcgtcc accactccca cctcgagaag     540

aaaaatggcg taatctaatg gaagacattt caaaaatcag ttgtcagtcc taccgcagtg     600

tagtctatga aaatccagn                                                  619


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ctatgctaca gatcactctg tgcttgtggt gatcgtgcga ttgccgatgg aagccttctt     180

gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa     240

gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc     300

taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt ggttggcaaa     360

aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt tttagagaca     420

tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca     480

actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat     540
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M80678527.ST25
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                20   25   30

Asp Glu Phe Leu Glu Pro Leu Glu Leu Cys Tyr Arg Ser Leu Cys Ala
                35   40   45

Cys Gly Asp Arg Ala Ile Ala Asp Gly Ser Leu Leu Asp Phe Leu Arg
    50   55   60

Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg Leu Asp Ile Arg Gln
65   70   75   80

Glu Ser Asp Arg His Thr Asp Val Met Asp Ala Ile Thr Lys His Leu
                85   90   95

Glu Ile Gly Ser Tyr Gln Asp Trp Ser Glu Glu Lys Arg Gln Glu Trp
                100   105   110

Leu Leu Ser Glu Leu Val Gly Lys Arg Pro Leu Phe Gly Pro Asp Leu
            115   120   125

Pro Gln Thr Asp Glu Ile Arg Glu Val Leu Glu Thr Phe His Val Ile
    130   135   140

Ala Glu Leu Pro Ser Asp Asn Phe Gly Ala Tyr Ile Ile Ser Met Ala
145   150   155   160

Thr Ala Pro Ser Asp Val Leu Ala Val Glu Leu Leu Gln Arg Glu Cys
                165   170   175

Lys Ile Lys Asn Pro Leu Arg Val Val Pro Leu Phe Glu Lys Leu Ala
                180   185   190

Asp Leu Glu Ser Ala Pro Ala
            195

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ctatgctaca gatcactctg tgcttgtggt gatcgtgcga ttgccgatgg aagccttctt     180

gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa .   240

gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc     300

taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt ggttggcaaa     360

aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt tttagagaca     420

tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca     480

actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat     540

ccgttaagag ttgttccgtt gtttgagaaa cttgctgatc tcgagtctgc tcctgctg      598


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ctatgctaca gatcactctg tgcttgtggt gatcgtgcga ttgccgatgg aagccttctt     180

gatttcttga ggcaagtttc cacttttgga ctgtcactgg taagacttga tataaggcaa     240

gagtcagatc gtcacacgga cgtgatggat gccattacca aacatttgga aattggatcc     300

taccaagact ggtctgaaga aaaaagacag gaatggcttt tgtctgagtt ggttggcaaa     360

aggccgcttt ttggacctga cctacctcaa accgatgaaa ttagagaagt tttagagaca     420

tttcatgtca tagcagaact tccatcagac aactttggag cctatatcat ttcgatggca     480

actgccccgt ctgatgtgct agcggttgaa cttcttcaac gtgaatgcaa aatcaagaat     540

ccgttaagag ttgttccgtt gtttgagaaa cttgctgatc tcgn                     584


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caaactagat tttccaccta ggtcgtcacg agatтттcct cttcactatt тттcттттtc       180

atataataac tcaacacttt ттctagctac ttactagtac tgtgtaacac aaatтттatt       240

cattatggct actcctcgca acattgaaaa aatggcttca attgatgctc aattgagact       300

actagcacca aggaaagttt ctgatgatga taaacttgtc gagtatgatg ctttgttatt       360

ggatcgattc cttgacattc ttcaagattt gcatggagaa gatatcagac aaactgttca       420

agattgttat gagttatcgg cagagtatga aggggagctt aagccggaga aattggagga       480

acttgggaat atgcttactg gtcttgatgc tggagattct attgttatag caaaatcatt       540

ttctcatatg cttaatttgg caaacttggc agagn                                  575
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            20                  25                  30


Glu Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp
        35                  40                  45


Leu His Gly Glu Asp Ile Arg Gln Thr Val Gln Asp Cys Tyr Glu Leu
    50                  55                  60


Ser Ala Glu Tyr Glu Gly Glu Leu Lys Pro Glu Lys Leu Glu Glu Leu
65                  70                  75                  80


Gly Asn Met Leu Thr Gly Leu Asp Ala Gly Asp Ser Ile Val Ile Ala
                85                  90                  95


Lys Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu
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       100   105   . 110

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caaactagat tttccaccta ggtcgtcacg agattttcct cttcactatt tttctttttc    180

atataataac tcaacacttt ttctagctac ttactagtac tgtgtaacac aaattttatt    240

cattatggct actcctcgca acattgaaaa aatggcttca attgatgctc aattgagact    300

actagcacca aggaaagttt ctgatgatga taaacttgtc gagtatgatg ctttgttatt    360

ggatcgattc cttgacattc ttcaagattt gcatggagaa gatatcagac aaactgttca .    420

agattgttat gagttatcgg cagagtatga aggggagctt atgccggaga aattggagga    480

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agattttcca cctaggttgt cacgagattt tcctcttcac tattttctt tttcatataa    180

taattcaaca ttttttctag ctacttacta gtactgtgta acacaaattt tattcattat    240

ggctactcct cgcaacattg aaaaaatggc ttcaattgat gctcaattga gactactagc    300
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accaaggaaa gtttctgatg atgataaact tgtcgagtat gatgctttgt tattggatcg      360

attccttgac attcttcaag atttgcatgg agaagatatc agacaaactg ttcaagattg      420

ttatgagtta tcggcagagt atgaagggga gcttaagccg gagaaattgg aggaacttgg      480

gaatatgctt actggtcttg atgctggaga ttctattgtt atagcaaaat cattttn       537
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gattcctcca aacgagccat atcgtgttat tcttggaggt gtgagggaca aactgtataa   180

tacacgtgaa cgtgctcgac agttattagc aaatggaacc tctgacatcc ttgaagagac   240

aaccttcacg aatgttgagc agtttctgga gcctcttgaa ctgtgttata ggtcactttg   300

tgcatgtggt gaccgatcaa tagcagacgg aagccttctt gatttcttgc gacaagtttc   360

tacatttgga ctttcacttg taagactcga catccgtcaa gagtcagaca ggcacacaga   420

cgttatggat gcaattacaa aacacttgga gattggatct taccgagaat ggtcggaaga   480

acgcaggcag gaatggctct tgtctgagct tagtggaaaa cgccctctct tcggccatga   540

tcttcctaag acagaagaaa ttgccgatgt tttagatacc ttncacgtna tttcanaact   600

tncctcanat agctttggtg cctatatcat ctcaatggca acctccccat ctgatgtgct   660

agctgtcgag cttttacaac gtgaatgtca tgtgaagcag ccgttaanag ttgttccact   720

gtttgaaaag ctcgccngtc ttgagtctgc tcctgctgcg gnagcgcgtt ttttnttaga   780

ttgggncana accgnnntaa tggaaagcag aagttntgat aggtactcan actngggaaa   840

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            20                  25                  30

His Tyr Ile Glu Phe Trp Lys Gln Ile Pro Pro Asn Glu Pro Tyr Arg
            35                  40                  45

Val Ile Leu Gly Gly Val Arg Asp Lys Leu Tyr Asn Thr Arg Glu Arg
    50                  55                  60

Ala Arg Gln Leu Leu Ala Asn Gly Thr Ser Asp Ile Leu Glu Glu Thr
65                  70                  75                  80

Thr Phe Thr Asn Val Glu Gln Phe Leu Glu Pro Leu Glu Leu Cys Tyr
                85                  90                  95

Arg Ser Leu Cys Ala Cys Gly Asp Arg Ser Ile Ala Asp Gly Ser Leu
            100                 105                 110

Leu Asp Phe Leu Arg Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg
            115                 120                 125

Leu Asp Ile Arg Gln Glu Ser Asp Arg His Thr Asp Val Met Asp Ala
    130                 135                 140

Ile Thr Lys His Leu Glu Ile Gly Ser Tyr Arg Glu Trp Ser Glu Glu
145                 150                 155                 160

Arg Arg Gln Glu Trp Leu Leu Ser Glu Leu Ser Gly Lys Arg Pro Leu
                165                 170                 175

Phe Gly His Asp Leu Pro Lys Thr Glu Glu Ile Ala Asp Val Leu Asp
            180                 185                 190

Thr Xaa His Xaa Ile Ser Xaa Leu Xaa Ser Xaa Ser Phe Gly Ala Tyr
            195                 200                 205

Ile Ile Ser Met Ala Thr Ser Pro Ser Asp Val Leu Ala Val Glu Leu
210                 215                 220

Leu Gln Arg Glu Cys His Val Lys Gln Pro Leu Xaa Val Val Pro Leu
225                 230                 235                 240

Phe Glu Lys Leu Ala Xaa Leu Glu Ser Ala Pro Ala Ala Xaa Ala Arg
            245                 250                 255

Phe Xaa Leu Asp Trp Xaa Xaa Thr Xaa Xaa Met Glu Ser Arg Ser Xaa
            260                 265                 270
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Asp Arg Tyr Ser Xaa Xaa Gly Lys Asp Ala Gly Xaa
            275   280

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tggaaaaaat ggcatcaatt gatgcacagc ttagacaatt agtaccagca aaagttagtg     180

aagatgataa acttattgag tatgatgctt tgttgttgga tcggtttctt gatatccttc     240

aggatttaca tggagaggat ctgaaagatt ctgttcaaga agtgtatgaa ctttctgcgg     300

agtatgaaag aaagcatgat cctaagaaac ttgaagagct cggaaatttg ataacaagtt     360

tagatgcagg agattcaatt gttgttgcta agtcctttc gcacatgctt aacttggcca     420

acttagctga agaggttcag attgctcatc gtcgaaggaa caagttgaag aaaggagatt     480

ttagggatga gagcaatgca actaccgaat cagacatcga agaaactctt aagagacttg     540

tgtttaatat gaagaaatct cctcaggaag ttnttgatgc gttgaagaac cnnaccgttg     600

atttggttct tactgctcat cccactcagt ccgttcgang nccnctgctt cccnnngcct     660

ggnacgggna ccgcnctgnc tatcnnactg nnn                                  693


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Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp Leu
            35   40   45

His Gly Glu Asp Leu Lys Asp Ser Val Gln Glu Val Tyr Glu Leu Ser
        50   55   60

Ala Glu Tyr Glu Arg Lys His Asp Pro Lys Lys Leu Glu Glu Leu Gly
65   70   75   80

Asn Leu Ile Thr Ser Leu Asp Ala Gly Asp Ser Ile Val Val Ala Lys
                    85   90   95

Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu Glu Val Gln
                100   105   110

Ile Ala His Arg Arg Arg Asn Lys Leu Lys Lys Gly Asp Phe Arg Asp
            115   120   125

Glu Ser Asn Ala Thr Thr Glu Ser Asp Ile Glu Glu Thr Leu Lys Arg
    130   135   140

Leu Val Phe Asn Met Lys Lys Ser Pro Gln Glu Val Xaa Asp Ala Leu
145   150   155   160

Lys Asn Xaa Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln Ser
                165   170   175

Val Arg Xaa Xaa Leu Leu Pro Xaa Ala Trp Xaa Gly Xaa Arg Xaa Xaa
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Tyr Xaa Thr Xaa

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195

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tctctcttct ctgcgtttca aaccctagtt gttttgttga ttgatctaaa tggcgttctt   180

tcgaagcgtt tctgcgcttt caaaactacg atctcgtgtg ggtcaacaac ctagtcttgc   240

taattcagtt agatggctcc aaactccaag ctccagtaac actgatcttt attctgagat   300

gaaggagcta gttccagagt atcaggaacg tgttaagaag ttgaagaaag accatggaag   360

tgttgaattg ggaaaaatca cagctgatat ggtacttggt ggaatgagag gaatgactgc   420

tttagtgtgg ctaggctcag ctgttgaccc agatgaggga attcgcttta ggggcatgac   480

aattcctgac tgccagaaaa cacttccagg tgctttttcct ggtggggagc ctttgcccga   540

ggctatactg tggcttctat tgaccggaaa ggtaccaagt aaagagcaag tagattcatt   600

agctcacgaa ttgcgaagtc gtgcaaaaat cccagagtat gcttacaagg caattgatgc   660

actgcctgtt tctgctcatc caatgacaca atttagtact ggtgtaatgg ccctccaggt   720

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ggagagtgag tttacaaagg catacgagag tgggatacat aagtcaaggt attgggagcc      780

aacttatgag gatagcttga atttaattgc tcgtttgcct ggaattgctg cctatattta      840

tcgacggata tacaaggatg gaaaaatcat accattggat gattctttgg attatggtgc      900

aaactatgct cacatgttag gatttgatga tccagaaacg ctggagttta tgaggctgta      960

tatttctatc catagtgatc atgaaggngg caacgttagt tctcacacag ctcacctagt     1020

tgctagttca ctatcagatc cttatcttgc attcgcagct gctctgaatg gtttagctgg     1080

cccactgcat ggtttagcca atcaggaagt tctacgatgg atcagaaaca tagttaagga     1140

gtttggaact ccaaacataa gtacagaaca attgagcgac tacattcata aaacattgaa     1200

cagtggccag gttgtgcctg gatatggaca tggagttttg cgcaatacag acccaagata     1260

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            20                  25                  30


Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
        35                  40                  45


Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser
    50                  55                  60


Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg
65                  70                  75                  80


Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
                85                  90                  95


Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
            100                 105                 110


Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
        115                 120                 125


Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
    130                 135                 140


Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
145                 150                 155                 160
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Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser
            165             170             175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
            180             185             190

Glu Ser Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
            195             200             205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
    210             215             220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
225             230             235             240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
                245             250             255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
            260             265             270

Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu Ser
            275             280             285

Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly Pro
    290             295             300

Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn Ile
305             310             315             320

Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser Asp
                325             330             335

Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr Gly
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His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg Glu
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tctctcttct ctgcgtttca aaccctagtt gttttgttga ttgatcttaa tggcgttctt     180

tcgaagcgtt tctgcgcttt caaaactacg atctcgtgtg ggtcaacaac ctagtcttgc     240

taattcagtt agatggctcc aaactccaag ctccagtaac actgatcttt attctgagat     300

gaaggagcta gttccagagt atcaggaacg tgttaagaag ttgaagaaag accatggaag     360

tgttgaattg ggaaaaatca cagctgatat ggtacttggt ggaatgagag gaatgactgc     420

tttagtgtgg ctaggctcag ctgttgaccc agatgaggga attcgcttta ggggcatgac     480

aattcctgac tgccagaaaa cacttccagg tgcttttcct ggtggggagc ctttgcccga     540

ggctatactg tggcttctat tgaccggaaa ggtaccaagt aaagagcaag tagattcatt     600

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actgcctgtt tctgctcatc caatgacaca an                                   692
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attcccaatt cttttggatc cgaaatcatt cattctacgc ttcttctctc ttctctgcgt   120

ttcaaaccct agttgttttg ttgattgatc ttaatggcgt tctttcgaag cgtttctgcg   180

ctttcaaaac tacgatctcg tgtgggtcaa caacctagtc ttgctaattc agttagatgg   240

ctccaaactc caagctccag taacactgat ctttattctg agatgaagga gctagttcca   300

gagtatcagg aacgtgttaa gaagttgaag aaagaccatg gaagtgttga attgggaaaa   360

atcacagctg atatggtact tggtggaatg agaggaatga ctgctttagt gtggctaggc   420

tcagctgttg acccagatga gggaattcgc tttaggggca tgacaattcc tgactgccag   480

aaaacacttc caggtgcttt tcctggtggg gagcctttgc ccgaggctat actgtggctt   540

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caaaactacg atctcgtgtg ggtcaacaac ctagtctcgc taattcagtt agatggctcc   180

aaactccaag ctccagtaac actgatcttt attctgagat gaaggagcta gttccagagt   240

atcaggaacg tgttaagaag ttgaagaaag atcatggaag tgttgaattg ggaaaagtca   300

cagctgatat ggtacttggt ggaatgagag gaatgacagc tttagtgtgg ctaggctcag   360

ctgttgaccc agatgaggga attcgcttta ggggcatgac aattcctgac tgccagaaaa   420

cacttccagg tgcttttcct ggtggggagc ctttgcccga ggctatactg tggctgccat   480

tgaccggaaa ggtaccaagt aaagagcaag tagattcatt agctcacgaa ttgcgaagtc   540

gtgcaaaaat cccagagtat gcttacaagg caattgatgc actgcctgtt tctgctcatc   600

caatgacaca atttagtact ggtgtaatgg ccctccaggt ggagagtgag tttacaaagg   660

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gtcttgctaa ttcagttaga tggctccaaa ctccaagctc cagtaacact gatctttatt     180

ctgagatgaa ggagctagtt ccagagtatc aggaacgtgt taagaagttg aagaaagacc     240

atggaagtgt tgaattggga aaaatcacag ctgatatggt acttggtgga atgagaggaa     300

tgactgcttt agtgtggcta ggctcagctg ttgacccana tgagggaatt cgctttaggg     360

gcatgacaat tcctgactgc cacaaaacac ttgcaggtgc ttttnctggc ggggagnctt     420

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ctgccagaaa acacttccag gtgctcttcc tggtggggag cctttgcccg aggctatact     180
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gtggcttcta ttgaccggaa aggtaccaag taaagagcaa gtagattcat tagctcacga    240

attgcgaagt cgtgcaaaaa tcccagagta tgcttacaag gcaattgatg cactgcctgt    300

ttctgctcat ccaatgacac aatttagtac tggtgtaatg gccctccagg tggagagtga    360

gtttacaaag gcatacgaga gtgggataca taagtcaagg tattgggagc caacttatga    420

ggatagcttg aatttaattg ctcgtttgcc tggaattgct gcctatattt atcgacggat    480

atacaaggat ggaaaaatca taccattgga tgattctttg gattatggtg caaactatgc    540

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n                                                                      601
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agcctttgcc cgaggctata ctgtggcttc tattgaccgg aaaggtacca agtaaagagc    180

aagtagattc attagctcac gaattgcgaa gtcgtgcaaa aatcccagag tatgcttaca    240

aggcaattga tgcactgcct gtttctgctc atccaatgac acaatttagt actggtgtaa    300

tggccctcca ggtggagagt gagtttacaa aggcatacga gagtgggata cataagtcaa    360

ggtattggga gccaacttat gaggatagct tgaatttaat tgctcgtttg cctggaattg    420

ctgcctatat ttatcgacgg atatacaagg atggaaaaat cataccattg gatgattctt    480

tggattatgg tgcaaactat gctcacatgt taggatttga tgatccagaa acgctggagt    540

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ataccattgg atgattcttt ggattatggt gcaaactatg ctcacatgtt aggatttgat       180

gatccagaaa cgctggagtt tatgaggctg tatatttcta tccatagtga tcatgaaggt       240

ggcaacgtta gttctcacac agctcaccta gttgctagtt cactatcaga tccttatctt       300

gcattcgcag ctgctctgaa tggtttagct ggcccactgc atggtttagc caatcaggaa       360

gttctacgat ggatcagaaa catagttaag gagtttggaa ctccaaacat aagtacagaa       420

caattgagcg actacattca taaaacattg aacagtggcc aggttgtgcc tggatatgga       480

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<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (7)..(7)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (124)..(124)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (1243)..(1244)
<223>  n is a, c, g, or t

<400>  336
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M80678527.ST25

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cntttcnttt ccacagcatc ctaatcctaa tcctaatcct aatcctatta ctaattacta      60

attactaatt actagtacta attagtaata ccgatccctt tttctcgaac ccattcattc     120

aagnagaaga aggaaaaaca aaatccacac aaacaaacat cttacaacaa tgtcaacgac     180

aactactaca accgacgaat ccaagctgca cgacgctgca cggaaccgtt tggccaccct     240

ctcagctcac ttgcttcctt cctccacaac ctccgccgcg ctcctccatc ctattcacct     300

ttcttcttcc tccgggatct ccccaccgtc taatgtcaaa ggaacactca ccgttgttga     360

tgaacgtacc gggaagaagt ataccattga ggtctctcct gatggcaccg ttaaagccaa     420

tgatttcaag aagatatcaa ctgggaagaa tgataaggga ctcaaacttt atgatcctgg     480

atatttaaac actgctcctg tgcgatcaac aatttcttat attgatggtg atgagggaat     540

ccttagatat agaggatacc ccattgagga gttggccgag aaaagcacct ttccggaagt     600

ggcatatctc atattgtatg gaaatttgcc ttctgcaaat cagttacaag aatgggaatt     660

tgctatatct cagcattcag ccttacctca aggagttttg gatctcatac aatcaatgcc     720

tcaagatgca catcctatgg gcgtcctagt gaatgcaata agcgctctgt ctgtttttca     780

tcctgacgca aatcctgctc tcagaggtct tgacatctac aactcaaagc aagtgagaga     840

caaacaaata gcacggatta ttggaaagat aacaacaatt gctgctgcaa ttaatcttag     900

aatggcagga aggccacctg tgcttccatc caacaaacta tcttacacag agaacttcct     960

atacatgctt gattctctag gcaatcggtc atataaaccc aaccctcagc taactcgtgc    1020

actagacatc atcttcatcc tgcatgcaga acatgaaatg aattgctcta catctgctgt    1080

acgacacctt gcatcaagcg gcgtcgatgt atacactgct attgctggag gtgttggagc    1140

tctgtatgga cctcttcatg gtggagctaa tgaggcggtc cttaaaatgc tgagtgaaat    1200

tggaagtgtc gataacattc cagagttcat tgaaggtgtt aann                     1244
```

```
<210>   337
<211>   358
<212>   PRT
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (358)..(358)
<223>   Xaa can be any naturally occurring amino acid

<400>   337

Met Ser Thr Thr Thr Thr Thr Thr Asp Glu Ser Lys Leu His Asp Ala
1               5                   10                  15


Ala Arg Asn Arg Leu Ala Thr Leu Ser Ala His Leu Leu Pro Ser Ser
            20                  25                  30


Thr Thr Ser Ala Ala Leu Leu His Pro Ile His Leu Ser Ser Ser Ser
        35                  40                  45
```

M80678527.ST25

Gly Ile Ser Pro Pro Ser Asn Val Lys Gly Thr Leu Thr Val Val Asp
    50   55   60

Glu Arg Thr Gly Lys Lys Tyr Thr Ile Glu Val Ser Pro Asp Gly Thr
65   70   75   80

Val Lys Ala Asn Asp Phe Lys Lys Ile Ser Thr Gly Lys Asn Asp Lys
            85   90   95

Gly Leu Lys Leu Tyr Asp Pro Gly Tyr Leu Asn Thr Ala Pro Val Arg
            100   105   110

Ser Thr Ile Ser Tyr Ile Asp Gly Asp Glu Gly Ile Leu Arg Tyr Arg
        115   120   125

Gly Tyr Pro Ile Glu Glu Leu Ala Glu Lys Ser Thr Phe Pro Glu Val
    130   135   140

Ala Tyr Leu Ile Leu Tyr Gly Asn Leu Pro Ser Ala Asn Gln Leu Gln
145   150   155   160

Glu Trp Glu Phe Ala Ile Ser Gln His Ser Ala Leu Pro Gln Gly Val
            165   170   175

Leu Asp Leu Ile Gln Ser Met Pro Gln Asp Ala His Pro Met Gly Val
            180   185   190

Leu Val Asn Ala Ile Ser Ala Leu Ser Val Phe His Pro Asp Ala Asn
        195   200   205

Pro Ala Leu Arg Gly Leu Asp Ile Tyr Asn Ser Lys Gln Val Arg Asp
    210   215   220

Lys Gln Ile Ala Arg Ile Ile Gly Lys Ile Thr Thr Ile Ala Ala Ala
225   230   235   240

Ile Asn Leu Arg Met Ala Gly Arg Pro Pro Val Leu Pro Ser Asn Lys
            245   250   255

Leu Ser Tyr Thr Glu Asn Phe Leu Tyr Met Leu Asp Ser Leu Gly Asn
            260   265   270

Arg Ser Tyr Lys Pro Asn Pro Gln Leu Thr Arg Ala Leu Asp Ile Ile
        275   280   285

Phe Ile Leu His Ala Glu His Glu Met Asn Cys Ser Thr Ser Ala Val
    290   295   300

Arg His Leu Ala Ser Ser Gly Val Asp Val Tyr Thr Ala Ile Ala Gly
305   310   315   320

```
                              M80678527.ST25
Gly Val Gly Ala Leu Tyr Gly Pro Leu His Gly Gly Ala Asn Glu Ala
            325                 330                 335


Val Leu Lys Met Leu Ser Glu Ile Gly Ser Val Asp Asn Ile Pro Glu
            340                 345                 350


Phe Ile Glu Gly Val Xaa
            355
```

```
<210>  338
<211>  609
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (7)..(7)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (609)..(609)
<223>  n is a, c, g, or t

<400>  338
cntttcnttt ccacagcatc ctaatcctaa tcctaatcct aatcctatta ctaattacta    60

attactaatt actagtacta attagtaata ccgatccctt tttctcgaac ccattcattc   120

aattcaaaga aggaaaaaca aaatcacaca aacaaacatc ttacaacaat gtcaacgaca   180

actactacaa ccgacgaatc caagctgcac gacgctgcac ggaaccgttt ggctaccctc   240

tcagctcact tgcttccttc ctccacaaac tccgctgcgc ttctccatcc tatccacctt   300

tcttcttcct ctgggatctc cccaccgtct aatgtcaaag gaacactcac cgttgttgat   360

gaacgtaccg ggaagaagta taccattgag gtctctcctg atggcaccgt taaagccaat   420

gatttcaaga agatatcaac tgggaagaat gataaggggc tcaaacttta tgatcctgga   480

tatttaaaca ctgctcctgt gcgatcaaca atttcttata ttgatggtga tgagggaatc   540

cttagatata gaggataccc cattgaagag ttggccgaga aaagcacctt ccggaagtg   600

gcatatctn                                                          609
```

```
<210>  339
<211>  589
<212>  DNA
<213>  Trifolium repens


<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  n is a, c, g, or t
```

M80678527.ST25

```
<220>
<221>  misc_feature
<222>  (5)..(5)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (16)..(16)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (589)..(589)
<223>  n is a, c, g, or t

<400>  339
gnagnagaag gaaacncaaa tccacaaaca aaactcttac aacaatgtca accacaacta      60
ctacaaccga cgaatccaag ctgcacgacg ctgcacggaa ccgtttggcc accctctcag     120
ctcacttgct tccttcctcc acaacctccg ccgcgctcct ccatcctatt cacctttccg     180
cttcctccgg gatctcccca ccgtctaatg tcaaaggaac actcaccgtt gttgatgaac     240
gtaccgggaa gaagtataac attgaggtct cacctgatgg caccgttaaa gccaatgatt    .300
tcaagaagat atcaactggg aagaatgata agggactcaa actttatgat cctggatatt     360
taaacactgc tcctgtgcga tcaacaattt cttatattga tggtgatgag ggaatcctta     420
gatatagagg ataccccatt gaggagttgg ccgagaaaag cacctttccg gaagtggcat     480
atctcatatt gtatggaaat ttgccttctg caaatcagtt acaagaatgg gaatttgcta     540
tatctcagca ttcagcctta cctcaaggag ttttggatct catacaatn                 589
```

```
<210>  340
<211>  594
<212>  DNA
<213>  Trifolium repens

<220>
<221>  misc_feature
<222>  (2)..(3)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (5)..(5)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (23)..(23)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (593)..(594)
<223>  n is a, c, g, or t

<400>  340
gnngnagaag gaaacacaaa atncacaaac aaaaacatct acaacaatg tcaaccacaa       60
ctactacaac cgacgaatcc aagctgcacg acgctgcacg gaaccgtttg gccaccctct     120
```

M80678527.ST25

```
cagctcactt gcttccttcc tccacaacct ccgccgcgct cctccatcct attcaccttt    180

ccgcttcctc cgggatctcc ccaccgtcta atgtcaaagg aacactcacc gttgttgatg    240

aacgtaccgg gaagaagtat aacattgagg tctcacctga tggcaccgtt aaagccaatg    300

atttcaagaa gatatcaact gggaagaatg ataagggact caaactttat gatcctggat    360

atttaaacac tgctcctgtg cgatcaacaa tttcttatat tgatggtgat gagggaatcc    420

ttagatatag aggatacccc attgaggagt tggccgagaa aagcaccttt ccggaagtgg    480

catatctcat attgtatgga aatttgcctt ctgcaaatca gttacaagaa tgggaatttg    540

ctatatctca gcattcagcc ttacctcaag gagttttgga tctcatacaa tcnn          594
```

```
<210>   341
<211>   570
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (2)..(2)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (20)..(20)
<223>   n is a, c, g, or t

<220>
<221>   misc_feature
<222>   (570)..(570)
<223>   n is a, c, g, or t

<400>   341
gnaaagagga aaaacaaatn cacaaacaac atcttacaca atgtcacgac aactactaca    60

accgacgaat ccaagctgca cgacgctgca cggaaccgtt tagccaccct ctcagctcac    120

ttgcttcctt cctccacaac ctccgccgcg ctcctccatc ctattcacct ttcttcttcc    180

tccgggatct ccccaccgtc taatgtcaaa ggaacactca ccgttgttga tgaacgtacc    240

gggaagaagt ataccattga ggtctctcct gatggcaccg ttaaagccaa tgatttcaag    300

aagatatcga ctgggaagaa tgataaggga ctcaaacttt atgatcctgg atatttaaac    360

actgctcctg tgcgatcaac aatttcttat attgatggtg atgagggaat ccttagatat    420

agaggatacc ccattgagga gttggccgag aaaagcacct ttccggaagt ggcatatctc    480

atattgtatg gaaatttgcc ttctgcaaat cagttacaag aatgggaatt tgctatatct    540

cagcattcag ccttacctca aggagtttta                                     570
```

```
<210>   342
<211>   592
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
```

M80678527.ST25

```
<222>  (2)..(2)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (17)..(17)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (591)..(592)
<223>  n is a, c, g, or t

<400>  342
gnaaggaaaa acaaatncca aacaactctt acacaatgtc acgacaacta ctacaaccga      60

cgaatccaag ctgcacgacg ctgcacggaa ccgtttggct accctctcag ctcacttgct     120

tccttcctcc acaaactccg ctgcgcttct ccatcctatc cacctttctt cttcctctgg     180

gatctcccca ccgtctaatg tcaaaggaac actcaccgtt gttgatgaac gtaccgggaa     240

gaagtatacc attgaggtct ctcctgatgg caccgttaaa gccaatgatt tcaagaagat     300

atcaactggg aagaatgata aggggctcaa actttatgat cctggatatt taaacactgc     360

tcctgtgcga tcaacaattt cttatattga tggtgatgag ggaatcctta gatatagagg     420

ataccccatt gaagagttgg ccgagaaaag cacctttccg gaagtggcat atctcatatt     480

gtatggaaat ttgccttctg caaatcagtt acaagaatgg gaatttgcta tatctcagca     540

ttcagcctta cctcaaggag ttttggatct catacaatca atgcctcaag nn             592


<210>  343
<211>  579
<212>  DNA
<213>  Trifolium repens

<220>
<221>  misc_feature
<222>  (12)..(12)
<223>  n is a, c, g, or t

<220>
<221>  misc_feature
<222>  (579)..(579)
<223>  n is a, c, g, or t

<400>  343
atagaggctc cnattgagga gttggcgaga aaagcacttt tatggaagtg tcctatctat      60

aatgtatgga agtttaccta ctgaaagtaa gttagctgaa tggaatttcg ctatatctca     120

gcattcagct gttccagaag gagttttgga tatcatacaa tcaatgcctc atgatgcaca     180

tcctatgggt gtcctagtga atgcaataag cgctctttct gtttttcatc ctgacgccaa     240

tcctgctctt agaggtcttg atatttacga ctcaaaggaa gtgagagaca aacaaatagc     300

acggattatt ggaaagatta taacaattgc tgctgcagtt tatcttagaa tggcaggaag     360

gccacctgtg cttccatcca accaactatc ttacactgag aacttcctat acatgcttga     420

ttctttaggc aatcggtcat ataaacccaa ccctcagcta actcgtgcac tagacattat     480
```

M80678527.ST25

```
cttcatcctg catgcagaac atgaaatgaa ttgctctaca tctgctgtcc gacaccttgc   540

atcaagcggc gttgatgtat atactgctat tgctggggn                          579
```

```
<210>   344
<211>   594
<212>   DNA
<213>   Trifolium repens


<220>
<221>   misc_feature
<222>   (593)..(594)
<223>   n is a, c, g, or t

<400>   344
agaatgggaa tttgctatat ctagcattag ccttacctca aggagttttg gatctcatac    60

aatcaatgcc tcaagatgca catcctatgg gcgtgcttgt taatgctcta agtgctttgt   120

ctgtttttca tcctgatgca aatcctgctc tcagaggtct tgacatctac aactcaaagc   180

aagtgagaga caaacaaata gtgcggatta ttggaaagat aacaacaatt gctgctgcga   240

ttaatcttag attgggagga aggccacctg ttcttccatc caacaaactt tcttacacag   300

agaacttcct ttacatgctt gattctcttg gcaatcggtc atataaacct aatcctcgtc   360

taactcgtgc actggacatc atcttcatcc ttcatgcaga acatgaaatg aattgctcta   420

catctgctgt acgccacctt gcatcaagtg gtgtcgatgt atacactgct attgctggag   480

gtgttggagc tctgtatgga cctcttcatg gtggagctaa tgaggcggtc cttaaaatgc   540

tgagtgaaat tggaagtgtc gataacattc cagagttcat tgaaggtgtt aann          594
```

```
<210>   345
<211>   1738
<212>   DNA
<213>   Trifolium repens

<400>   345
ggccgcgaat tcactagtga ttaagcagtg gtaacaacgc agagtacgcg ggggtaggcg    60

gagatttcaa acccaatttt cctcttaaat ctctcccaac ttctccttcc aattcccatt   120

accattcatt cccagaggtc gagatggcag catcagcagc agctactttt actattggaa   180

ctgcccaaac agggaggcca cttcctcaat caaacccttt tggtttgaaa gtcaattccc   240

aggttaattt taagaccttc tctggtctca aggccatgtc atctctaaga tgcgagtctg   300

aatcatcttt ctttggcaac gaaactagtg ctgctctgcg tgcaactttt gcacccaaag   360

ctcaaaagga aaaccaaaac atcaaccgca atttgcatcc tcaggcatcc tacaaagtgg   420

cggttcttgg tgctgcagga ggaattggtc agccactggc acttctcatt aagatgtcgc   480

ctttggtttc cgacctgcat ctttatgata tcgcgaatgt taagggagtt gctgctgata   540

tcagtcattg caacactcct tcaaaggttt tggatttcac aggtgcttct gagttggcaa   600

attgtttgaa aggtgtggat gtagttgtta tacctgctgg tgttcccaga aaacctggca   660

tgactcgtga tgacctttc aacatcaatg ccggtatagt cagggacttg gtcaccgctg   720
```

M80678527.ST25

```
ttgcagataa ttgccctggt gcttttattc atgttatcag taacccggtg aactctacag   780

ttcctattgc tgctgaaatt ctgaaacaaa agggtgttta tgatcctaaa aagctctttg   840

gtgttactac acttgatgtt gtgagggcaa acacatttgt tgctcagaaa aagaacctga   900

ggctgattga tgtagatgtt cctgttgttg gtggtcatgc cgggattacc attcttcctc   960

ttctgtcaaa gacaagaccc tcagcaaatt tcactgatga agaaattgag gcgctaactg  1020

tcaggattca aaatgctgga actgaagttg ttgaggccaa ggctggtgca gggtctgcta  1080

ctttgtcaat ggcctatgca gcagctagat ttgttgaatc atctcttcgt gcgcttgacg  1140

gtgacgctga tgtgtatgag tgctcatttg tacagtcaga tctgactgac cttccgtttt  1200

ttgcttcaag ggtgaagatt ggtaggaaag gagtcgaggc tttgattcca actgatctcc  1260

aagggttgag tgagtatgag cagaaggctt tggaagcact taaaccagaa cttaaggcta  1320

gcattgaaaa gggtattgct tttgctcaaa agcaaactgt ttctgcttaa cttattttgt  1380

gaaagcatat attctatact ctctagcgtc catgcgagag aatgtcaatg ggtgatttct  1440

tgggttatgg atttatttga gcatgaatac tacttagagg acttagattg cagatttatg  1500

tagcatcatt tactgcttcc agaacttatg atttaaattt tccatagtat catttctact  1560

tacagatttg ttagtagaac gggaggggct tccatttcta ttctctatat tgagctttag  1620

ttttgatcag aaatctcaat agattgttac tatcatgtac tactagaatt ggaaaaatgt  1680

aaacgttgca ttttgaataa tactgccttt ggactagttt gtgtttcgaa aaaaaaaa    1738
```

<210> 346
<211> 408
<212> PRT
<213> Trifolium repens

<400> 346

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Met Ala Ala Ser Ala Ala Ala Thr Phe Thr Ile Gly Thr Ala Gln Thr
1               5                   10                  15

Gly Arg Pro Leu Pro Gln Ser Asn Pro Phe Gly Leu Lys Val Asn Ser
            20                  25                  30

Gln Val Asn Phe Lys Thr Phe Ser Gly Leu Lys Ala Met Ser Ser Leu
        35                  40                  45

Arg Cys Glu Ser Glu Ser Ser Phe Phe Gly Asn Glu Thr Ser Ala Ala
    50                  55                  60

Leu Arg Ala Thr Phe Ala Pro Lys Ala Gln Lys Glu Asn Gln Asn Ile
65                  70                  75                  80

Asn Arg Asn Leu His Pro Gln Ala Ser Tyr Lys Val Ala Val Leu Gly
                85                  90                  95

Ala Ala Gly Gly Ile Gly Gln Pro Leu Ala Leu Leu Ile Lys Met Ser
            100                 105                 110
```

M80678527.ST25

Pro Leu Val Ser Asp Leu His Leu Tyr Asp Ile Ala Asn Val Lys Gly
     115   120   125

Val Ala Ala Asp Ile Ser His Cys Asn Thr Pro Ser Lys Val Leu Asp
   130   135   140

Phe Thr Gly Ala Ser Glu Leu Ala Asn Cys Leu Lys Gly Val Asp Val
145   150   155   160

Val Val Ile Pro Ala Gly Val Pro Arg Lys Pro Gly Met Thr Arg Asp
         165   170   175

Asp Leu Phe Asn Ile Asn Ala Gly Ile Val Arg Asp Leu Val Thr Ala
        180   185   190

Val Ala Asp Asn Cys Pro Gly Ala Phe Ile His Val Ile Ser Asn Pro
   195   200   205

Val Asn Ser Thr Val Pro Ile Ala Ala Glu Ile Leu Lys Gln Lys Gly
   210   215   220

Val Tyr Asp Pro Lys Lys Leu Phe Gly Val Thr Thr Leu Asp Val Val
225   230   235   240

Arg Ala Asn Thr Phe Val Ala Gln Lys Lys Asn Leu Arg Leu Ile Asp
        245   250   255

Val Asp Val Pro Val Val Gly Gly His Ala Gly Ile Thr Ile Leu Pro
        260   265   270

Leu Leu Ser Lys Thr Arg Pro Ser Ala Asn Phe Thr Asp Glu Glu Ile
     275   280   285

Glu Ala Leu Thr Val Arg Ile Gln Asn Ala Gly Thr Glu Val Val Glu
   290   295   300

Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala Ala
305   310   315   320

Ala Arg Phe Val Glu Ser Ser Leu Arg Ala Leu Asp Gly Asp Ala Asp
        325   330   335

Val Tyr Glu Cys Ser Phe Val Gln Ser Asp Leu Thr Asp Leu Pro Phe
        340   345   350

Phe Ala Ser Arg Val Lys Ile Gly Arg Lys Gly Val Glu Ala Leu Ile
     355   360   365

Pro Thr Asp Leu Gln Gly Leu Ser Glu Tyr Glu Gln Lys Ala Leu Glu
   370   375   380

M80678527.ST25

```
Ala Leu Lys Pro Glu Leu Lys Ala Ser Ile Glu Lys Gly Ile Ala Phe
385                 390             395                 400

Ala Gln Lys Gln Thr Val Ser Ala
                405
```

<210> 347
<211> 3372
<212> DNA
<213> Trifolium repens

<400> 347

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gaattcgatt aagcagtggt aacaacgcag agtacgcggg gataacactg tctctctgat    60
ccaaattttc catcccttgt cttctttttc ttcttcttcc tcgtatctta ctgcctcatt   120
acacgggtga gaaggagtga attgctccaa tggcaacaaa caaaatggaa aaaatggcat   180
caattgatgc acagcttaga caattagtac cagcaaaagt tagtgaagat gataaactta   240
ttgagtatga tgctttgttg ttggatcggt ttcttgatat ccttcaggat ttacatggag   300
aggatctgaa agattctgtt caagaagtgt atgaactttc tgcggagtat gaaagaaagc   360
atgatcctaa gaaacttgaa gagctcggaa atttgataac aagtttagat gcaggagatt   420
caattgttgt tgctaagtcc ttttcgcaca tgcttaactt ggccaactta gctgaagagg   480
ttcagattgc tcatcgtcga aggaacaagt tgaagaaagg agatttttagg gatgagagca   540
atgcaactac cgaatcagac atcgaagaaa ctcttaagag acttgtgttt aatatgaaga   600
aatctcctca ggaagttttt gatgcgttga agaaccagac cgttgatttg gttcttactg   660
ctcatcctac tcagtcggtt cgtaggtcgt tgcttcaaaa gcatggaagg gtaaggaact   720
gtttatctca attgtatgct aaagacatca ctcctgatga taagcaagag ctcgacgaag   780
ctctccagag ggagattcaa gctgcattcc gtaccgatga aatcaagagg acacctccaa   840
caccacaaga tgagatgaga gcagggatga gttacttcca cgaaacaatt tggaagggtg   900
tccctaaatt tcttcgccgt gttgatactg cgttgaagaa catagggatt aacgaacgtg   960
ttccctataa tgctcctctt attcagtttt cttcatggat gggggggtgat cgtgatggta  1020
atccgagagt gactcctgaa gtaacgagag atgtttgctt actagctaga atgatggctg  1080
caaatttgta ttattcccag attgaagatc ttatgtttga actgtctatg tggcgttgca  1140
atgatgagct gcgtgatcgc gcagaagaac ttcacaggaa ttccaagaaa gatgaagttg  1200
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Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp Leu
        35   40   45

His Gly Glu Asp Leu Lys Asp Ser Val Gln Glu Val Tyr Glu Leu Ser
    50   55   60

Ala Glu Tyr Glu Arg Lys His Asp Pro Lys Lys Leu Glu Glu Leu Gly
65   70   75   80

Asn Leu Ile Thr Ser Leu Asp Ala Gly Asp Ser Ile Val Val Ala Lys
                85   90   95

Ser Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu Glu Val Gln
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Ile Ala His Arg Arg Arg Asn Lys Leu Lys Lys Gly Asp Phe Arg Asp
        115   120   125

Glu Ser Asn Ala Thr Thr Glu Ser Asp Ile Glu Glu Thr Leu Lys Arg
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Leu Val Phe Asn Met Lys Lys Ser Pro Gln Glu Val Phe Asp Ala Leu
145   150   155   160

Lys Asn Gln Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln Ser
                165   170   175

Val Arg Arg Ser Leu Leu Gln Lys His Gly Arg Val Arg Asn Cys Leu
            180   185   190

Ser Gln Leu Tyr Ala Lys Asp Ile Thr Pro Asp Asp Lys Gln Glu Leu
        195   200   205

Asp Glu Ala Leu Gln Arg Glu Ile Gln Ala Ala Phe Arg Thr Asp Glu
    210   215   220

Ile Lys Arg Thr Pro Pro Thr Pro Gln Asp Glu Met Arg Ala Gly Met
225   230   235   240

Ser Tyr Phe His Glu Thr Ile Trp Lys Gly Val Pro Lys Phe Leu Arg
                245   250   255

Arg Val Asp Thr Ala Leu Lys Asn Ile Gly Ile Asn Glu Arg Val Pro
            260   265   270

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Tyr Asn Ala Pro Leu Ile Gln Phe Ser Ser Trp Met Gly Gly Asp Arg
        275   280   285

Asp Gly Asn Pro Arg Val Thr Pro Glu Val Thr Arg Asp Val Cys Leu
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Leu Ala Arg Met Met Ala Ala Asn Leu Tyr Tyr Ser Gln Ile Glu Asp
305   310   315   320

Leu Met Phe Glu Leu Ser Met Trp Arg Cys Asn Asp Glu Leu Arg Asp
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Arg Ala Glu Glu Leu His Arg Asn Ser Lys Lys Asp Glu Val Ala Lys
            340   345   350

His Tyr Ile Glu Phe Trp Lys Lys Ile Pro Leu Asn Glu Pro Tyr Arg
        355   360   365

Val Ile Leu Gly Asp Val Arg Asp Lys Leu Tyr Arg Thr Arg Glu Arg
    370   375   380

Ser Arg Tyr Leu Leu Ala His Gly Tyr Ser Glu Ile Pro Glu Glu Ala
385   390   395   400

Thr Phe Thr Asn Val Asp Glu Phe Leu Glu Pro Leu Glu Leu Cys Tyr
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Arg Ser Leu Cys Ala Cys Gly Asp Arg Ala Val Ala Asp Gly Ser Leu
            420   425   430

Leu Asp Phe Leu Arg Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg
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Leu Asp Ile Arg Gln Glu Ser Asp Arg His Thr Asp Val Met Asp Ala
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Ile Thr Lys His Leu Glu Ile Gly Ser Tyr Gln Asp Trp Ser Glu Glu
465   470   475   480

Lys Arg Gln Glu Trp Leu Leu Ser Glu Leu Val Gly Lys Arg Pro Leu
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Phe Gly Pro Asp Leu Pro Gln Thr Asp Glu Ile Arg Glu Val Leu Glu
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Thr Phe His Val Ile Ala Glu Leu Pro Ser Asp Asn Phe Gly Ala Tyr
        515   520   525

Ile Ile Ser Met Ala Thr Ala Pro Ser Asp Val Leu Ala Val Glu Leu
    530   535   540

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Leu Gln Arg Glu Cys Lys Ile Lys Asn Pro Leu Arg Val Val Pro Leu
545   550   555   560

Phe Glu Lys Leu Ala Asp Leu Glu Ser Ala Pro Ala Ala Leu Ala Arg
                565   570   575

Leu Phe Ser Ile Asp Trp Tyr Ile Asn Arg Ile Asp Gly Lys Gln Glu
            580   585   590

Val Met Ile Gly Tyr Ser Asp Ser Gly Lys Asp Ala Gly Arg Phe Ser
        595   600   605

Ala Ala Trp Gln Leu Tyr Lys Ala Gln Glu Asp Leu Ile Asn Val Ala
    610   615   620

Gln Lys Tyr Gly Val Lys Leu Thr Met Phe His Gly Arg Gly Gly Thr
625   630   635   640

Val Gly Arg Gly Gly Gly Pro Thr His Leu Ala Ile Leu Ser Gln Pro
            645   650   655

Pro Asp Thr Ile His Gly Ser Leu Arg Val Thr Val Gln Gly Glu Val
            660   665   670

Ile Glu Gln Ser Phe Gly Glu Glu His Leu Cys Phe Arg Thr Leu Gln
        675   680   685

Arg Phe Thr Ala Ala Thr Leu Glu His Gly Met Arg Pro Pro Ser Ser
    690   695   700

Pro Lys Pro Glu Trp Arg Glu Leu Met Asp Gln Met Ala Val Ile Ala
705   710   715   720

Thr Glu Glu Tyr Arg Ser Ile Val Phe Lys Glu Pro Arg Phe Val Glu
                725   730   735

Tyr Phe Arg Leu Ala Thr Pro Glu Met Glu Tyr Gly Arg Met Asn Ile
            740   745   750

Gly Ser Arg Pro Ala Lys Arg Pro Cys Gly Gly Ile Glu Thr Leu
        755   760   765

Arg Ala Ile Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe His Leu
    770   775   780

Pro Val Trp Leu Gly Phe Gly Ala Ala Phe Lys Gln Val Ile Ala Lys
785   790   795   800

Asp Val Lys Asn Leu His Met Leu Gln Glu Met Tyr Asn Gln Trp Pro
                805   810   815

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Phe Phe Arg Val Thr Ile Asp Leu Val Glu Met Val Phe Ala Lys Gly
              820   825   830

Asp Pro Gly Ile Ala Ala Leu Asn Asp Arg Leu Leu Val Ser Gln Asp
          835   840   845

Leu Trp Pro Phe Gly Glu Gln Leu Arg Ser Lys Tyr Glu Glu Thr Lys
    850   855   860

Lys Leu Leu Leu Gln Val Ala Thr His Lys Glu Val Leu Glu Gly Asp
865   870   875   880

Pro Tyr Leu Lys Gln Arg Leu Arg Leu Arg Asp Ser Tyr Ile Thr Thr
              885   890   895

Leu Asn Val Phe Gln Ala Tyr Thr Leu Lys Arg Ile Arg Asp Pro Asn
              900   905   910

Tyr Lys Val Glu Val Arg Pro Arg Val Ser Lys Glu Ser Ala Glu Thr
          915   920   925

Ser Lys Ser Ala Asp Glu Leu Val Thr Leu Asn Pro Thr Ser Glu Tyr
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Ala Pro Gly Leu Glu Asp Thr Leu Ile Leu Thr Met Lys Gly Ile Ala
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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
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Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
                85              90              95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
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Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
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Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
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Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
145             150             155             160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser
            165             170             175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
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Glu Gly Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
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Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
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Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
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Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
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Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
            260             265             270

Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu
        275             280             285

Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly
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Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn
305             310             315             320
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Ile Val Lys Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser
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Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr
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Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg
              355             360             365


Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val
    370               375             380


Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys
385               390             395             400


Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu
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Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly
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Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala
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Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
            35                  40                  45
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Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg
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Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
            85              90              95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
            100             105             110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
        115             120             125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
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Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
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Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
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Glu Gly Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
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Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
    210             215             220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
225             230             235             240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
            245             250             255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
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Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu
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Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly
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Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn
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Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr
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Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys
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450   455   460

Glu Lys Leu Val Gly Ala Ser Ser
465   470

<210> 353
<211> 1885
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acttttcaac ctgttgtttt gttgattgat ctaaatggcg ttctttcgaa gcgtttctgc   120
gctttcaaaa ctacgatctc gtgtgggtca acaacctagt cttgctaatt cagttagatg   180
gctccaaact ccaagctcca gtaacactga tctttattct gagatgaagg agctagttcc   240
agagtatcag gaacgtgtta agaagttgaa gaaagaccat ggaagtgttg aattgggaaa   300
aatcacagct gatatggtac ttggtggaat gagaggaatg actgctttag tgtggctagg   360
ctcagctgtt gacccagatg agggaattcg ctttaggggc atgacaattc ctgactgcca   420
gaaaacactt ccaggtgctt ttcctggtgg ggagcctttg cccgaggcta tactgtggct   480
tctattgacc ggaaaggtac caagtaaaga gcaagtagat tcattagctc acgaattgcg   540
aagtcgtgca aaaatcccag agtatgctta caaggcaatt gatgcactgc ctgtttctgc   600

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tcatccaatg acacaattta gtactggtgt aatggccctc caggtggaga gtgagtttac      660

aaaggcatac gagagtggga tacataagtc aaggtattgg gagccaactt atgaggatag      720

cttgaattta attgctcgtt tgcctggaat tgctgcctat atttatcgac ggatatacaa      780

ggatggaaaa atcataccat tggatgattc tttggattat ggtgcaaact atgctcacat      840

gttaggattt gatgatccag aaacgctgga gtttatgagg ctgtatattt ctatccatag      900

tgatcatgaa ggtggcaacg ttagttctca cacagctcac ctagttgcta gttcactatc      960

agatccttat cttgcattcg cagctgctct gaatggttta gctggcccac tgcatggttt     1020

agccaatcag gaagttctac gatggatcag aaacatagtt acggaatttg gaactccaaa     1080

cataagtaca gaacaattga gcgactacat tcataaaaca ttgaacagtg gccaggttgt     1140

gcctggatat ggacatggag ttttgcgcaa tacagaccca agatacactt gccagaggga     1200

gtttgcattg aagcatttgc ctaatgatcc acttttccag ctggtgtcca aaattaaaga     1260

agtcgtgcct cccattctga ccaagttagg aaaggttaaa aatccatggc ctaatgttga     1320

tgctcatagt ggagtactac taaactacta tggtctaact gaagaaaact attataccgt     1380

tcttttttggc gtcgcgagga gtattggagt tggccctcag ctgatatggg accgtgctct     1440

tggaatgcca cttgaaaggc caaaaagtgt cacactggag aaacttgaga aactcgtcgg     1500

tgcatcatcc taaaattgaa agcacagtta cctctggatt actaaaatac acactgcggt     1560

tgtaggttgt tggtaactcg aaacatttgg tgcaattgca atgagaaata ttcgttgccc     1620

acatcccctt cccttatttt tctggttgtt ttgtcagcat tttttgattg agaagatttt     1680

ggtatttagg aaagggtggg attatcaccc tcacagttgt ctttccattt ttctacacag     1740

cataaattag gtcccaaggg agcatcagaa taaaggcatt atgttttggg ggtaatcccc     1800

ctgtattctt tctaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagtactc tgcgttgtta     1860

ccactgctta atcactagtg aattc                                          1885
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<400> 354

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Met Ala Phe Phe Arg Ser Val Ser Ala Leu Ser Lys Leu Arg Ser Arg
1               5                   10                  15

Val Gly Gln Gln Pro Ser Leu Ala Asn Ser Val Arg Trp Leu Gln Thr
            20                  25                  30

Pro Ser Ser Ser Asn Thr Asp Leu Tyr Ser Glu Met Lys Glu Leu Val
        35                  40                  45

Pro Glu Tyr Gln Glu Arg Val Lys Lys Leu Lys Lys Asp His Gly Ser
    50                  55                  60
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Val Glu Leu Gly Lys Ile Thr Ala Asp Met Val Leu Gly Gly Met Arg
65   70   75   80

Gly Met Thr Ala Leu Val Trp Leu Gly Ser Ala Val Asp Pro Asp Glu
                85   90   95

Gly Ile Arg Phe Arg Gly Met Thr Ile Pro Asp Cys Gln Lys Thr Leu
            100   105   110

Pro Gly Ala Phe Pro Gly Gly Glu Pro Leu Pro Glu Ala Ile Leu Trp
        115   120   125

Leu Leu Leu Thr Gly Lys Val Pro Ser Lys Glu Gln Val Asp Ser Leu
    130   135   140

Ala His Glu Leu Arg Ser Arg Ala Lys Ile Pro Glu Tyr Ala Tyr Lys
145   150   155   160

Ala Ile Asp Ala Leu Pro Val Ser Ala His Pro Met Thr Gln Phe Ser
            165   170   175

Thr Gly Val Met Ala Leu Gln Val Glu Ser Glu Phe Thr Lys Ala Tyr
            180   185   190

Glu Ser Gly Ile His Lys Ser Arg Tyr Trp Glu Pro Thr Tyr Glu Asp
        195   200   205

Ser Leu Asn Leu Ile Ala Arg Leu Pro Gly Ile Ala Ala Tyr Ile Tyr
    210   215   220

Arg Arg Ile Tyr Lys Asp Gly Lys Ile Ile Pro Leu Asp Asp Ser Leu
225   230   235   240

Asp Tyr Gly Ala Asn Tyr Ala His Met Leu Gly Phe Asp Asp Pro Glu
            245   250   255

Thr Leu Glu Phe Met Arg Leu Tyr Ile Ser Ile His Ser Asp His Glu
            260   265   270

Gly Gly Asn Val Ser Ser His Thr Ala His Leu Val Ala Ser Ser Leu
        275   280   285

Ser Asp Pro Tyr Leu Ala Phe Ala Ala Ala Leu Asn Gly Leu Ala Gly
    290   295   300

Pro Leu His Gly Leu Ala Asn Gln Glu Val Leu Arg Trp Ile Arg Asn
305   310   315   320

Ile Val Thr Glu Phe Gly Thr Pro Asn Ile Ser Thr Glu Gln Leu Ser
            325   330   335

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Asp Tyr Ile His Lys Thr Leu Asn Ser Gly Gln Val Val Pro Gly Tyr
              340   345   350

Gly His Gly Val Leu Arg Asn Thr Asp Pro Arg Tyr Thr Cys Gln Arg
              355   360   365

Glu Phe Ala Leu Lys His Leu Pro Asn Asp Pro Leu Phe Gln Leu Val
    370   375   380

Ser Lys Ile Lys Glu Val Val Pro Pro Ile Leu Thr Lys Leu Gly Lys
385   390   395   400

Val Lys Asn Pro Trp Pro Asn Val Asp Ala His Ser Gly Val Leu Leu
              405   410   415

Asn Tyr Tyr Gly Leu Thr Glu Glu Asn Tyr Tyr Thr Val Leu Phe Gly
          420   425   430

Val Ala Arg Ser Ile Gly Val Gly Pro Gln Leu Ile Trp Asp Arg Ala
          435   440   445

Leu Gly Met Pro Leu Glu Arg Pro Lys Ser Val Thr Leu Glu Lys Leu
    450   455   460

Glu Lys Leu Val Gly Ala Ser Ser
465   470

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ttgcccgagg ctatactgtg gc   22

<210> 356
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<400> 356
cagctcacct agttgctag   19

<210> 357
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ccatggccta atgttgatgc                                                    20


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<400>  358
ttggcctttc aagtggcatt cc                                                 22


<210>  359
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<400>  359
cagaatggga ggcacgactt c                                                  21


<210>  360
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<400>  360
atgtgagcat agtttgcacc                                                    20


<210>  361
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<400>  361
gactgccaga aaacacttcc agg                                                23


<210>  362
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<400>  362
atgactgctt tagtgtgg                                                      18


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<400>  363
ctcaagtttc tccagtgtga cac                                       23


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tgacttatgt atcccacc                                             18


<210>  365
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<400>  365
gctctgaatg gtttagctgg                                           20


<210>  366
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<400>  366
gcactgcctg tttctgctca tcc                                       23


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<400>  367
agccaactta tgaggatagc                                           20


<210>  368
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<400>  368
ctccaatact cctcgcgacg cc                                        22
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aggcacaacc tggccactg                                                    19


<210>   370
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<400>   370
acgttgccac cttcatgatc                                                   20


<210>   371
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<400>   371
gttgttatac ctgctggtgt t                                                 21


<210>   372
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<400>   372
ctcactcaac ccttggagat                                                   20


<210>   373
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<400>   373
tcctaagaaa cttgaagagc tcgg                                              24


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<400>  374
agatgtttgc ttactagc                                             18


<210>  375
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gccagcagca ataccCttca tgg                                       23


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<400>  376
ttgcttctca actgttcc                                             18


<210>  377
<211>  51
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<220>
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<400>  377
ggggacaagt ttgtacaaaa aagcaggctt gatcttaatg gcgttctttc g        51


<210>  378
<211>  50
<212>  DNA
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<220>
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<400>  378
ggggaccact ttgtacaaga aagctgggtt ttcaatttta ggacgatgcg         50


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<400>  379
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<212>   DNA
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<400>   381
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<220>
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<400>   382
ggggaccact ttgtacaaga aagctgggtc tagattcaat tttaggatga tgcacc      56


<210>   383
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<220>
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<400>   383
ggggacaagt ttgtacaaaa aagcaggctc tagaaattcc cattaccatt cattcc      56


<210>   384
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<220>
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<400>   384
ggggaccact ttgtacaaga aagctgggtc tagattgaca ttctctcgca tggacgc     57


<210>   385
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<220>
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<400>   385
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<210>   387
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<400>   387
ataataaccg gttgatcatg agcggagaat taaggg                            36


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<400>   388
ataatagcgg ccgctagtaa catagatgac accgcg                            36


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<400>   390
aataaccggt acccacgaag gagcatcgtg g                                 31


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<400>  392
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<210>  393
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<400>  393
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<210>  394
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<400>  394
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<210>  395
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<400>  395
ccgattccgt ttcaatggct cgta                                  24


<210>  396
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<400>  396
gccatcctta accctaagca cgt                                   23


<210>  397
<211>  23
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<400>   397
ttgcatttgc ttggaacaac tag                                              23


<210>   398
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<400>   398
gcaagagcaa acatgaaacc a                                                21


<210>   399
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<220>
<223>   Primer sequence

<400>   399
atgggtcttg gtggttgca                                                   19


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gcagcaagaa gatcaaccaa agcca                                            25
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